



Table of Contents

FOSSIL FUELS	
• Oil	Pg. 1
• Heavy Oil	Pg. 8
• Oil Shale	Pg. 10
• Natural Gas	Pg. 10
• Coal	Pg. 16
• Coal Bed Methane	Pg. 20
• Oil Sands	Pg. 21
• Methane Hydrates	Pg. 21
• Hydrogen Production	Pg. 22
• Fuel Cells	Pg. 25
• Energy Efficiency	Pg. 28
RENEWABLE RESOURCES	
• Wind	Pg. 31
• Solar	Pg. 32
• Biomass	Pg. 35
• Ethanol	Pg. 44
• Biodiesel	Pg. 49
• Fuel Cells	Pg. 53
• Other Fuels Derived from Renewable Resources	Pg. 57
• Energy Efficiency	Pg. 60
NUCLEAR	Pg. 62
GLOBAL CLIMATE CHANGE	
• Carbon Sequestration	Pg. 64
• Carbon Capture	Pg. 69
• Carbon Monitoring/Modeling	Pg. 74
• Other Greenhouse Gas Emissions	Pg. 76



Energy-Related Papers — 2008 AIChE Annual Meeting

The following is a preliminary grid of Energy-related papers and is subject to change.



Fossil

OIL					
Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5x	Catalytic Strategies for the Molecular Engineering of Fuels	PNCC	Exhibit Hall A
Sunday	1:00 PM	5a	Characterizing Water In Oil Emulsions with Application to Methane Hydrate Formation	PNCC	Exhibit Hall A
Monday	8:30 AM	25e	All Hydroprocessing Route to High Quality Lubricant Base Oil Manufacture Using Chevron Isodewaxing Technology	Loews	Commonwealth A1
Monday	8:30 AM	24a	Cfd Applied In the Design and Trouble Shooting of Reactors	PNCC	Room 203-B
Monday	8:30 AM	38b	Channel Formation by Turbidity Currents: Navier-Stokes Based Linear Stability Analysis	PNCC	Room 104-B
Monday	8:30 AM	54h	Cubic-Plus-Association (CPA) Equation of State for Water-Containing Mixtures	PNCC	Room 103-C
Monday	8:30 AM	32a	Defect-Free Composite Pd Membranes with High Temperature Long-Term Stability	Loews	Congress A Room
Monday	8:30 AM	25a	Evolution and Revolution: Process Innovations In Aromatics Technology	Loews	Commonwealth A1
Monday	8:30 AM	21a	Industrial Perspectives In H ₂ Generation through Short Contact Time - Catalytic Partial Oxidation Technologies	PNCC	Room 203-A
Monday	8:30 AM	54g	Insights into the Solubility of Hydrocarbons In Water by the Soft-SAft Equation of State	PNCC	Room 103-C
Monday	8:30 AM	49b	Kinetics of Asphaltene Precipitation: A Novel Perspective	Marriott	Salon D
Monday	8:30 AM	49c	Partial Recovery of Wax Gel Strength: Quantitative and Qualitative Analyses	Marriott	Salon D
Monday	8:30 AM	47d	Synthesis of Highly C-Oriented AlPO ₄ -5 Membranes	PNCC	Room 202-B
Monday	8:30 AM	38c	Viscous Fingering In Chemical Systems	PNCC	Room 104-B
Monday	12:30 PM	67b	Advances in Process Synthesis - Energy & Environment	PNCC	Room 201-B
Monday	12:30 PM	75d	Autothermal Reforming of Dodecane Over Ru-Ni -Based Aerogel and Xerogel Catalysts	PNCC	Room 203-A
Monday	12:30 PM	123h	Catalytic CO ₂ Recycle (CCR) Technology	Marriott	Salon C
Monday	12:30 PM	106a	Characterization of Oilfield Waxes Using Nuclear Magnetic Resonance Spectroscopy	Marriott	Salon D
Monday	12:30 PM	124b	Dynamic Procedure for Solid/vapor and Liquid/vapor Equilibria of Heavy Alkanes	PNCC	Room 103-C
Monday	12:30 PM	83d	Effect of Urea and Urea Decomposition Byproducts on Zeolite Activity for Selective Catalytic Reduction	PNCC	Room 103-A
Monday	12:30 PM	124a	High Pressure Phase Behavior of Long Chain Alkanes: Solid-Solid and Solid-Liquid Transitions	PNCC	Room 103-C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	79d	Interacting Roles of Fuel Evaporation, Micro-Mixing and Homogeneous Chemical Kinetics In Limiting the Performance of Continuous Spray Combustors	PNCC	Room 203-B
Monday	12:30 PM	63a	Interactions of SO ₂ and H ₂ S with Modified Amorphous Carbon Films	Marriott	Salon I
Monday	12:30 PM	111a	Membrane Module Design	Loews	Congress A Room
Monday	12:30 PM	106d	Modeling of Heavy Oils Under Wide Range of Conditions with the Friction Theory	Marriott	Salon D
Monday	12:30 PM	122h	Molecular Interactions Between Structure-Directing Organic Molecules, Fluoride Species, and Siliceous Zeolite Frameworks Established by Two-Dimensional NMR	Marriott	Franklin 12
Monday	12:30 PM	96a	Molecule-Based Modeling of Petroleum Resids: Matthew Neurock's Linking of Quantum Chemistry and Global Petroleum Fractions	PNCC	Room 102-A
Monday	12:30 PM	75c	Morphological Study of Deposited Carbon Derived from Dodecane Reforming Over Ni-Based Monolith Catalysts	PNCC	Room 203-A
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	79e	On-the-Fly Reduction of Kinetic Mechanisms Using Element Flux Analysis	PNCC	Room 203-B
Monday	12:30 PM	75a	Rhodium Supported on Thermally Enhanced Zeolite as Catalysts	PNCC	Room 203-A
Monday	12:30 PM	82c	Silica Precipitation during Analcime Dissolution	Loews	Congress C Room
Monday	12:30 PM	128b	Systematic Velocity Data Reduction and Its Effect on Polymer Conformation Statistics In Viscoelastic Turbulent Channel Flows	PNCC	Room 104-A
Monday	12:30 PM	79b	The Reaction of Vinyl Radical with Alkenes: Measured Rates and Predicted Pressure-Dependent Product Distributions	PNCC	Room 203-B
Monday	12:30 PM	106c	The Role of Polydispersity on Gel Strength In Alkane Solutions	Marriott	Salon D
Monday	12:30 PM	85d	Theoretical Prediction of Effective Thermodiffusion Coefficient In Porous Media	PNCC	Room 109-B
Monday	12:30 PM	122d	Tud-C: A Tunable, Hierarchically Structured Mesoporous Zeolite Composite	Marriott	Franklin 12
Monday	12:30 PM	106b	Wax Deposition Modeling In Oil/water Two-Phase Flows	Marriott	Salon D
Monday	3:15 PM	169d	A Comparison of Mesopore Templating Methods for Ceria-Zirconia-Yttria Catalysts	PNCC	Room 202-B
Monday	3:15 PM	153b	Alkane Cracking and Dehydrogenation In Zeolites	PNCC	Room 102-A
Monday	3:15 PM	149a	Axial Particle Concentration Distribution In Two-Phase and Three-Phase Fluidized Beds with Binary Solid Mixtures	Loews	Congress B Room
Monday	3:15 PM	155c	Catalysis and Reaction Engineering: Sites, Pellets, and Reactors	Loews	Lescaze Room
Monday	3:15 PM	147d	Effect of Ceria on the Sulfation and Desulfation Behavior of Lean NO _x Trap Catalysts	PNCC	Room 103-A
Monday	3:15 PM	147f	Elucidating the Role of the Pt/Ba Interface during NO _x Storage and Reduction on Model Pt/Bao Catalysts	PNCC	Room 103-A
Monday	3:15 PM	149d	Emulsion Phase Density In Deep Fluidized Beds of Geldart Group a Materials	Loews	Congress B Room
Monday	3:15 PM	172b	Heavy Oil Combustion In Porous Media and Fractured System	Marriott	Salon D
Monday	3:15 PM	171d	Hexane Isomerization In a Reverse-Flow Chromatographic Reactor	PNCC	Room 103-B
Monday	3:15 PM	172a	Kinetics of Oil Shale Pyrolysis and Oil Composition	Marriott	Salon D
Monday	3:15 PM	132f	Metal Organic Framework Supported Molybdenum Carbide Sorbents for Sulfur Removal	Marriott	Salon I

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	3:15 PM	172c	Modeling In-Situ Production of Oil from Oil Shale	Marriott	Salon D
Monday	3:15 PM	161g	Modeling Interfacial Properties of Real Fluids Involved in Enhanced Oil Recovery through the Use of a Density Functional Theory Based on the Saft-Vr Eos	PNCC	Room 107-A
Monday	3:15 PM	184h	Molecular Chemisorption of O ₂ on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Monday	3:15 PM	154d	Polymer-Induced Drag Reduction of Turbulent Flows: What Have We Learnt from Direct Numerical Simulations ?	PNCC	Room 204-B
Monday	3:15 PM	184e	Reactivity of Epitaxial Vanadia on TiO ₂ : Are Support Interactions	Loews	Commonwealth D
Monday	3:15 PM	169f	Synthesis of Hierarchical Pore Zsm-5 on Silica Gel and Its Catalytic Performance for Fcc Reaction	PNCC	Room 202-B
Monday	3:15 PM	147c	The Influence of Pt Incorporation on NO _x Storage-Reduction Capacity of Nsr Monolith Catalysts	PNCC	Room 103-A
Monday	3:15 PM	143a	The Role of Mathematical Programming in the Evolution from Planning and Scheduling towards Enterprise-Wide Optimization	PNCC	Room 204-A
Monday	6:00 PM	185i	A Quantum Chemical Approach to Understanding How Gas Phase Conditions Affect the Thermodynamics and Kinetics of Oxidation Catalysis	PNCC	Exhibit Hall A
Monday	6:00 PM	186s	An Experimental Investigation of Oil / Water Flow In Horizontal and Inclined Pipes Using Piv and Gamma Measurements	PNCC	Exhibit Hall A
Monday	6:00 PM	187ad	Charge Stabilization In Nonpolar Liquids	PNCC	Exhibit Hall A
Monday	6:00 PM	190ac	Estimation of Vapor Pressure of Heavy Hydrocarbons Using Molar Refraction	PNCC	Exhibit Hall A
Monday	6:00 PM	187q	Hydrate Formation of Water Droplet In Hydrocarbon Phase	PNCC	Exhibit Hall A
Monday	6:00 PM	186r	Novel Size Measurement Method for Individual and Overlapped Bubble Images	PNCC	Exhibit Hall A
Monday	6:00 PM	189z	Preparation and Characterization of Nanodispersed Ag-Based Sorbent for Removal of Sulfur from Logistic Fuels	PNCC	Exhibit Hall A
Monday	6:00 PM	189t	Simulation of a High-Flux Riser-Reactor Flow Using Cfd Techniques	PNCC	Exhibit Hall A
Monday	6:00 PM	190al	Time-Temperature Superposition Analysis of Asphalt Complex Modulus	PNCC	Exhibit Hall A
Monday	6:00 PM	186v	Turbulence Effects on Evaporation Rate-Controlled Spray Combustor Performance	PNCC	Exhibit Hall A
Tuesday	8:30 AM	244c	A Generic Hydrodynamic Model of Fluid Catalytic Cracking (FCC) Riser Reactor	PNCC	Room 102-B
Tuesday	8:30 AM	252h	A Global Optimization-Quantum Chemistry Approach for a Predictive Saft Equation for Mixtures	PNCC	Room 103-C
Tuesday	8:30 AM	240a	A Metric for Monitoring Mpc Optimization Strategy	PNCC	Room 202-A
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	218a	Applications of a Micropyrolysis Index (MPI) towards Molecular Engineering of Fuels	Marriott	Salon D
Tuesday	8:30 AM	236a	Buoyancy-Driven Drop Squeezing through a Constriction	PNCC	Room 104-B
Tuesday	8:30 AM	198a	Computational Comparison of Piecewise Linearization Schemes in Gas Lifting and Pooling Optimization Problems	PNCC	Room 202-B
Tuesday	8:30 AM	218b	Deep Desulphurization of Transportation Fuels with Nanoreactions	Marriott	Salon D
Tuesday	8:30 AM	215a	Distributed Optimization and Control of Offshore Oil Production: The Intelligent Platform	PNCC	Room 203-A
Tuesday	8:30 AM	249c	Event Early Warning & Semantic Model In Smart Manufacturing	PNCC	Room 201-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	8:30 AM	244d	Magnetic Imaging of Pyrolysis Feedstocks to Model Olefin Product Yields from Naphthas	PNCC	Room 102-B
Tuesday	8:30 AM	249f	Open Discussion, "Overcoming Barriers to Smart Manufacturing Plants"	PNCC	Room 201-A
Tuesday	8:30 AM	320c	Property and Process Modeling of Aqueous Ammonia Processes for Post-Combustion Carbon Dioxide Capture	PNCC	Room 103-C
Tuesday	8:30 AM	249e	Smart Manufacturing Plants: Advances and Priorities	PNCC	Room 201-A
Tuesday	8:30 AM	192b	Surface Science and Catalysis of Mixed Metal Oxides	Loews	Commonwealth B
Tuesday	8:30 AM	235a	The Role of Solid and Liquid Phase Nonidealities In Determining the Solubility and Purity of Isomorphous Compounds	Marriott	Franklin 5
Tuesday	12:30 PM	325c	100 Years of Petroleum Refining Catalysts	Marriott	Salon E
Tuesday	12:30 PM	325a	A Hundred Year Historical View of Energy, An Essential Pillar for the Progress of Humanity	Marriott	Salon E
Tuesday	12:30 PM	299a	Calibration of DEM Material Models	Loews	Congress C Room
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	282b	Fifty Years of Fri Contributions to Separation Science	Marriott	Franklin 4
Tuesday	12:30 PM	252d	Fluid-Phase Properties Using Direct Calculation of Cluster Integrals	PNCC	Room 103-C
Tuesday	12:30 PM	325e	Gasification at a Crossroad	Marriott	Salon E
Tuesday	12:30 PM	314c	Mastering Simultaneous Reaction and Diffusion through Single Event Microkinetic Modeling of N-Alkane Hydroconversion on Pt/H-Zsm-5	PNCC	Room 102-B
Tuesday	12:30 PM	325g	One Hundred Years of Refining Catalysts	Marriott	Salon E
Tuesday	12:30 PM	325f	Past 100 Years of Refining and Future Expectations	Marriott	Salon E
Tuesday	12:30 PM	291e	Past, Present, and Future of Gas to Liquids Technology	Loews	Washington C Room
Tuesday	12:30 PM	259c	Surface Science Studies of Metal Oxides	Loews	Commonwealth B
Tuesday	3:15 PM	327a	A Look at the Advances In Catalysis Over the Past Century and Thoughts on the Challenges for the Future	Loews	Commonwealth B
Tuesday	3:15 PM	340d	Adsorption of CO2 on Rock Surfaces by Molecular Simulations	Marriott	Salon I
Tuesday	3:15 PM	340b	Design, Characterization and Application of a Hyperbranched Aminosilica (HAS) High-Capacity Sorbent for CO2 Capture from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	335a	Gallium-Incorporated Mfi Zeolites for Enhanced Aromatics Production Under Fischer-Tropsch Conditions	PNCC	Room 103-A
Tuesday	3:15 PM	357f	In Situ Magnetic Separation and Immobilization of Rhodococcus Erythropolis LSSE8-1 for Dibenzothiophene Biodesulfurization	Marriott	Franklin 2
Tuesday	3:15 PM	341e	Molecular Distillation Modeling and Simulation to Split Heavy Petroleum Fractions	Marriott	Franklin 4
Tuesday	3:15 PM	358h	Non-Coalescence of Oppositely Charged Droplets	PNCC	Room 104-B
Tuesday	3:15 PM	352e	Recent Advances In Surfactant Eor	PNCC	Room 103-C
Tuesday	3:15 PM	327d	Selectivity In Ethane Dehydrogenation Over Chromia	Loews	Commonwealth B
Tuesday	3:15 PM	330d	Supercritical Phase Fischer Tropsch Synthesis from Coal Derived Syngas	PNCC	Room 113-B
Wednesday	8:30 AM	449e	A Master of Engineering Program in Energy Economics and at Cornell University	Loews	Lescaze Room
Wednesday	8:30 AM	417e	Analysis of Formation of Water-In-Oil Emulsions	PNCC	Room 104-A
Wednesday	8:30 AM	417a	Bead Formation near the Contact Line	PNCC	Room 104-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday 8:30 AM	423c	Catalytic Cracking of Methylcyclohexane Over Fcc Catalysts In a Mini-Fluidized Crec Riser Simulator	PNCC	Room 303-B
Wednesday 8:30 AM	403d	Density Functional Theory Study of NOx Storage Reduction Catalysts	Marriott	Room 401/402
Wednesday 8:30 AM	438b	Flare Minimization for Chemical Process Industry Sustainability	Loews	Washington A Room
Wednesday 8:30 AM	443a	Influencing Order In the Flow of Worm-Like Micelles	PNCC	Room 109-B
Wednesday 8:30 AM	422b	Microscale Mixing of Mono- and Bi-Dispersed Microsphere Suspensions	PNCC	Room 104-B
Wednesday 8:30 AM	417j	Miscible Viscous Fingering In Three Dimensions:Fractal to Compact Crossover and Interfacial Roughness:Pore-Level Simulations	PNCC	Room 104-A
Wednesday 8:30 AM	448f	Optimal Supply Chain Design with Multi-Echelon Stochastic Inventory and Risk-Pooling	PNCC	Room 204-B
Wednesday 8:30 AM	444a	Propane/propylene Separation: From Molecular Scale to Process	Marriott	Salon K
Wednesday 8:30 AM	397b	Status and Future Perspectives of the Refinery Reactors SIG	Marriott	Salon J
Wednesday 8:30 AM	452f	The Adsorption of Water on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Wednesday 8:30 AM	410a	Using Nuclear Magnetic Resonance to Measure Emulsion Properties In Water In Oil Emulsions during Methane Hydrate Formation	PNCC	Room 108-A
Wednesday 12:30 PM	508d	A General Methodology for Preparing Nanostructured Silica Supported Catalysts	PNCC	Room 102-B
Wednesday 12:30 PM	498c	Bi-Level Planning for Profit Increment In Petroleum Industry	PNCC	Room 204-B
Wednesday 12:30 PM	505f	CO2 Capture by Moving Bed Temperature Swing Adsorption	Marriott	Salon K
Wednesday 12:30 PM	464f	Directed Assembly of Colloidal Disk Particles by Gravitation, Electrical Field and Flow Field	PNCC	Room 105-A
Wednesday 12:30 PM	481f	Hollow-Fiber-Based Adsorbent System for CO2 Capture from Flue Gas	PNCC	Room 113-B
Wednesday 12:30 PM	484c	Magnet Shielding of Some Magnetic Powder's on the Earth's Magnetic Field In Drilling Fluid	Loews	Commonwealth C
Wednesday 12:30 PM	490h	Molecular Simulation of CO2 and CO2/CH4 Mixture Adsorption and Diffusion In Metal-Organic Frameworks	Marriott	Salon I
Wednesday 12:30 PM	467g	Oscillatory Torsional Flow of Concentrated Suspensions	PNCC	Room 104-A
Wednesday 12:30 PM	476a	Petro-SIM Simulator and Cape-Open: Experiences and Successes	Marriott	Salon J
Wednesday 12:30 PM	471f	Stochastic Prediction and Control of Cyclic Combustion in Internal Combustion Engines	PNCC	Room 203-A
Wednesday 12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday 12:30 PM	495e	The Use of Discrete Element Modeling (DEM) and Computational Fluid Dynamics (CFD) for Analysis of Solid-Fluid Mixing	PNCC	Room 113-C
Wednesday 12:30 PM	486a	Toward the Reproducible Intrinsic Kinetic Measurement in Microreactors	PNCC	Room 303-B
Wednesday 3:15 PM	545d	Ab Initio Crystal Structure Determination Using Global Optimization	PNCC	Room 201-B
Wednesday 3:15 PM	534d	Achieving Energy Reductions Via a Global Energy Management System	PNCC	Room 202-A
Wednesday 3:15 PM	562c	Capturing Transient Interface Behavior In Porous Materials Using 3D Imaging Techniques	Marriott	Room 414/415
Wednesday 3:15 PM	522g	Effect of Baffles on Gas Bypassing In a 0.9-M-Diameter Unit	Loews	Congress B Room
Wednesday 3:15 PM	564b	Electron Beam Radiation Upgrading of Heavy Petroleum	PNCC	Room 105-B
Wednesday 3:15 PM	526b	Enhancing the Capacity of Silver Based Adsorbents for of Liquid Hydrocarbon Fuels	Marriott	Salon J

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Wednesday	3:15 PM	564c	Mixtures and Nanostructures In Enhanced Oil Recovery	PNCC	Room 105-B
Wednesday	3:15 PM	527d	Visualization of Colloidal Disk Assembly by Confocal Scanning Microscopy	PNCC	Room 105-A
Wednesday	6:00 PM	578y	A Novel Integrated Design of Wastewater and Heat Exchange Based on Cost Estimation	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575h	Dynamic Regeneration of NOx Storage Catalyst - Modeling Study	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575af	Effect of Heterogeneities In Activity on Pattern Formation In Catalytic Reactors	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575as	Effect of Urea and Urea Decomposition Byproducts on Activity for Scr	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577l	Eliminating Gaps Between Advanced Planning and Scheduling Models	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577s	Energy Optimization through Non-Linear Modeling and Control of Fuel Gas Process at Hovensa	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ap	Hydrodynamic and Mass Transfer Parameters of Gases in Organic Liquids Under Fischer-Tropsch Conditions	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575av	Kinetic Studies Over Co/SiO2 Catalyst for FT Synthesis	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ag	Multi-Mode Low-Dimensional Models for Real Time Simulation of Monolithic Catalytic Reactors	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578a	Operation and/or Design of Sustainable Processes Using Multi-Objective Optimization	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575d	Reactor Stability and Sensitivity Analysis in a Diesel Particulate Filter	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578ag	Retrofit of Heat Exchanger Networks Including Process Modifications	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578p	The Study of Process Design for Production of the Clean Fuel – Dimethyl Ether (DME)	PNCC	Exhibit Hall A
Thursday	8:30 AM	596g	Ab Initio and Molecular Simulation of Viscoelastic Solutions: Effect of Counter Ions	PNCC	Room 106-B
Thursday	8:30 AM	614d	Computational Strategies for the Planning of Deepwater Oilfield Infrastructure Under Decision Dependent Uncertainty	PNCC	Room 203-A
Thursday	8:30 AM	592b	Modeling of Fouling in Crude Oil Pre-Heat Trains to Reduce Energy Losses and Carbon Emissions	PNCC	Room 201-B
Thursday	8:30 AM	597c	Particle Size Optimization for Syngas Chemical Looping Process	Loews	Washington B Room
Thursday	8:30 AM	586g	Towards the Sustainable Use of Seawater for Process Cooling	Marriott	Room 502
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	627c	High Temperature Air Separation by Perovskite-Type Oxide Sorbents-Heat Effect Minimization	Marriott	Salon J
Thursday	12:30 PM	641d	Incipient Fault Detection In Offshore Oil and Gas Production Platforms: Hybrid Electro-Mechanical Monitoring of Rotating Equipment	PNCC	Room 204-C
Thursday	12:30 PM	645a	Phase Diagrams of Methanol and Alkane Binary Systems In the Field of Natural Gas Fractionators: Experimental Work and Modeling	PNCC	Room 103-C
Thursday	12:30 PM	627f	Pre-Combustion CO2 Capture at High Temperature with Alkaline Promoted Aluminas and Hydrotalcites: The Crucial Role of Alkaline Cations In CO2 Adsorption	Marriott	Salon J

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	12:30 PM	633e	Radius of Curvature Effect on the Hydrotransformation of N-Heptane Over Mesoporous Al-Mcm-41	PNCC	Room 102-A
Thursday	12:30 PM	672e	The Effects of Kinetic and Hydrocarbon Distribution on the Multiplicities of Deep Hydrodesulfurization Via Catalytic Distillation	PNCC	Room 201-B
Thursday	3:15 PM	686e	Coal Direct Chemical Looping (CDCL) Process	Marriott	Salon K
Thursday	3:15 PM	675a	Computational Design of Metal-Organic Frameworks for the Adsorption of CO ₂	Marriott	Salon J
Thursday	3:15 PM	691g	Design and Optimization of Micro Reactor-Heat Exchanger Cascade Configurations for Autothermal Conversion of Iso-Octane to Hydrogen	PNCC	Room 102-A
Thursday	3:15 PM	688g	Fractal Scaling In Crude Oil Price Evolution Via Time Series Analysis of Historical Data	PNCC	Room 203-B
Thursday	3:15 PM	702f	Frontal Flow Effects In 2-D Simulations of Orientation In High Aspect Ratio Particles Composites Made by Injection Molding	PNCC	Room 202-B
Thursday	3:15 PM	692b	Mechanism and Active Site Density Elucidation for Ethanol Oxidation Over Supported V Ox , Mo Ox , and W Ox Catalysts	PNCC	Room 102-B
Thursday	3:15 PM	699a	Palladium Membranes on Mesoporous Ceramic Supports: Effect of Metal-Support Interface on Hydrogen Permeation	Loews	Congress B Room
Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Thursday	3:15 PM	691a	Supported Silver Based Adsorbents for Deep Desulfurization of Hydrocarbon Fuels for Fuel Cell Applications	PNCC	Room 102-A
Thursday	6:00 PM	718e	Recovering Magnetic Powder from Sludge Discharged In Magnetic Separation Process from Oily Water at Oil Production Sites	PNCC	Exhibit Hall A
Thursday	6:00 PM	719af	Removal of Pah Compounds by Adsorption	PNCC	Exhibit Hall A
Friday	8:00 AM	742c	A Generalized Geometric Population Balance Model for Asphaltene Aggregation	Loews	Congress A Room
Friday	8:00 AM	735f	Effectiveness of Biosurfactant and Quaternary Ammonium Salt as Hydrate Anti-Agglomerants: Effect of Model Oil Concentration, Methanol as Co-Surfactant, and Salinity	PNCC	Room 109-B
Friday	8:00 AM	740a	Kinetic Phenomena In Low-Temperature CO Oxidation on Nanostructured Pt Catalysts	PNCC	Room 102-A
Friday	8:00 AM	733a	Optimal Model-Based Production Planning for Refinery Operations	PNCC	Room 202-B
Friday	8:00 AM	734d	Study on Gas Combustions In a Downhole Steam Generator by Reactive Dynamics Simulations	PNCC	Room 103-A
Friday	10:45 AM	761b	A Comparative Study of the Gasification Technology Versus Traditional Combustion Technologies for Power Generation In México	PNCC	Room 202-B
Friday	10:45 AM	760f	An STM Study of High-Coverage Structures of Atomic Oxygen on Pt(111)	Marriott	Room 309/310
Friday	10:45 AM	772d	Athermal Contribution to the Excess Entropy in the Long Chain Limit	PNCC	Room 103-B
Friday	10:45 AM	761c	Cfd Modeling Gas-Solid Flows in Fcc Riser Reactors: Simulation Using Kinetic Theory in a Fully Developed Flow	PNCC	Room 202-B
Friday	10:45 AM	768c	Electrochemical Performance of Direct Carbon Fuel Cell Based on Molten Carbonate Eutectic Electrolytes	PNCC	Room 111-B
Friday	10:45 AM	758a	Hydrocarbon Formation Model of Slurry-Phase Fischer-Tropsch Synthesis	PNCC	Room 104-B
Friday	10:45 AM	760b	Kinetic Modeling of NO Oxidation Over a Model Pt Catalyst	Marriott	Room 309/310
Friday	10:45 AM	758d	The Use of Isotopic Labels In Understanding CO/H ₂ Reactions	PNCC	Room 104-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



HEAVY OIL

Day	Time	Paper #	Paper Title	Property	Room
Monday	8:30 AM	54h	Cubic-Plus-Association (CPA) Equation of State for Mixtures	PNCC	Room 103-C
Monday	8:30 AM	21a	Industrial Perspectives In H ₂ Generation through Short Contact Time - Catalytic Partial Oxidation Technologies	PNCC	Room 203-A
Monday	8:30 AM	49b	Kinetics of Asphaltene Precipitation: A Novel Perspective	Marriott	Salon D
Monday	8:30 AM	49c	Partial Recovery of Wax Gel Strength: Quantitative and Qualitative Analyses	Marriott	Salon D
Monday	12:30 PM	124b	Dynamic Procedure for Solid/vapor and Liquid/vapor Equilibria of Heavy Alkanes	PNCC	Room 103-C
Monday	12:30 PM	63a	Interactions of SO ₂ and H ₂ S with Modified Amorphous Carbon Films	Marriott	Salon I
Monday	12:30 PM	106d	Modeling of Heavy Oils Under Wide Range of Conditions with the Friction Theory	Marriott	Salon D
Monday	12:30 PM	96a	Molecule-Based Modeling of Petroleum Resids: Matthew Neurock's Linking of Quantum Chemistry and Global Petroleum Fractions	PNCC	Room 102-A
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	106b	Wax Deposition Modeling In Oil/water Two-Phase Flows	Marriott	Salon D
Monday	3:15 PM	149a	Axial Particle Concentration Distribution In Two-Phase and Three-Phase Fluidized Beds with Binary Solid Mixtures	Loews	Congress B Room
Monday	3:15 PM	155c	Catalysis and Reaction Engineering: Sites, Pellets, and Reactors	Loews	Lescaze Room
Monday	3:15 PM	172b	Heavy Oil Combustion In Porous Media and Fractured System	Marriott	Salon D
Monday	3:15 PM	143a	The Role of Mathematical Programming in the Evolution from Planning and Scheduling towards Enterprise-Wide Optimization	PNCC	Room 204-A
Monday	6:00 PM	187ad	Charge Stabilization In Nonpolar Liquids	PNCC	Exhibit Hall A
Monday	6:00 PM	190ac	Estimation of Vapor Pressure of Heavy Hydrocarbons Using Molar Refraction	PNCC	Exhibit Hall A
Monday	6:00 PM	187q	Hydrate Formation of Water Droplet In Hydrocarbon Phase	PNCC	Exhibit Hall A
Monday	6:00 PM	190al	Time-Temperature Superposition Analysis of Asphalt Complex Modulus	PNCC	Exhibit Hall A
Tuesday	8:30 AM	240a	A Metric for Monitoring Mpc Optimization Strategy	PNCC	Room 202-A
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	198a	Computational Comparison of Piecewise Linearization Schemes in Gas Lifting and Pooling Optimization Problems	PNCC	Room 202-B
Tuesday	8:30 AM	249f	Open Discussion, "Overcoming Barriers to Smart Manufacturing Plants"	PNCC	Room 201-A
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	252d	Fluid-Phase Properties Using Direct Calculation of Cluster Integrals	PNCC	Room 103-C
Tuesday	12:30 PM	325e	Gasification at a Crossroad	Marriott	Salon E
Tuesday	12:30 PM	314c	Mastering Simultaneous Reaction and Diffusion through Single Event Microkinetic Modeling of N-Alkane Hydroconversion on Pt/H-Zsm-5	PNCC	Room 102-B
Tuesday	12:30 PM	325g	One Hundred Years of Refining Catalysts	Marriott	Salon E
Tuesday	12:30 PM	325f	Past 100 Years of Refining and Future Expectations	Marriott	Salon E
Tuesday	3:15 PM	340d	Adsorption of CO ₂ on Rock Surfaces by Molecular Simulations	Marriott	Salon I

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	3:15 PM	340b	Design, Characterization and Application of a Hyperbranched Aminosilica (HAS) High-Capacity Sorbent for CO ₂ Capture from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	341e	Molecular Distillation Modeling and Simulation to Split Heavy Petroleum Fractions	Marriott	Franklin 4
Tuesday	3:15 PM	358h	Non-Coalescence of Oppositely Charged Droplets	PNCC	Room 104-B
Wednesday	8:30 AM	417a	Bead Formation near the Contact Line	PNCC	Room 104-A
Wednesday	8:30 AM	423c	Catalytic Cracking of Methylcyclohexane Over Fcc Catalysts In a Mini-Fluidized Crec Riser Simulator	PNCC	Room 303-B
Wednesday	8:30 AM	417j	Miscible Viscous Fingering In Three Dimensions:Fractal to Compact Crossover and Interfacial Roughness:Pore-Level Simulations	PNCC	Room 104-A
Wednesday	12:30 PM	505f	CO ₂ Capture by Moving Bed Temperature Swing Adsorption	Marriott	Salon K
Wednesday	12:30 PM	476a	Petro-SIM Simulator and Cape-Open: Experiences and Successes	Marriott	Salon J
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday	12:30 PM	486a	Toward the Reproducible Intrinsic Kinetic Measurement in Multi-Phase Microreactors	PNCC	Room 303-B
Wednesday	3:15 PM	545d	Ab Initio Crystal Structure Determination Using Global Optimization	PNCC	Room 201-B
Wednesday	3:15 PM	564b	Electron Beam Radiation Upgrading of Heavy Petroleum	PNCC	Room 105-B
Wednesday	3:15 PM	564c	Mixtures and Nanostructures In Enhanced Oil Recovery	PNCC	Room 105-B
Wednesday	6:00 PM	577s	Energy Optimization through Non-Linear Modeling and Control of Fuel Gas Process at Hovensa	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575av	Kinetic Studies Over Co/SiO ₂ Catalyst for FT Synthesis	PNCC	Exhibit Hall A
Thursday	8:30 AM	586g	Towards the Sustainable Use of Seawater for Process Cooling	Marriott	Room 502
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Thursday	6:00 PM	719af	Removal of Pah Compounds by Adsorption	PNCC	Exhibit Hall A
Friday	8:00 AM	742c	A Generalized Geometric Population Balance Model for Asphaltene Aggregation	Loews	Congress A Room
Friday	8:00 AM	734d	Study on Gas Combustions In a Downhole Steam Generator by Reactive Dynamics Simulations	PNCC	Room 103-A
Friday	10:45 AM	761b	A Comparative Study of the Gasification Technology Versus Traditional Combustion Technologies for Power Generation In México	PNCC	Room 202-B
Friday	10:45 AM	772d	Athermal Contribution to the Excess Entropy in the Long Chain Limit	PNCC	Room 103-B
Friday	10:45 AM	761c	Cfd Modeling Gas-Solid Flows in Fcc Riser Reactors: Simulation Using Kinetic Theory in a Fully Developed Flow	PNCC	Room 202-B
Friday	10:45 AM	768c	Electrochemical Performance of Direct Carbon Fuel Cell Based on Molten Carbonate Eutectic Electrolytes	PNCC	Room 111-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



OIL SHALE

Day	Time	Paper #	Paper Title	Property	Room
Monday	12:30 PM	63a	Interactions of SO ₂ and H ₂ S with Modified Amorphous Carbon Films	Marriott	Salon I
Monday	3:15 PM	149a	Axial Particle Concentration Distribution In Two-Phase and Three-Phase Fluidized Beds with Binary Solid Mixtures	Loews	Congress B Room
Monday	3:15 PM	172a	Kinetics of Oil Shale Pyrolysis and Oil Composition	Marriott	Salon D
Monday	3:15 PM	172c	Modeling In-Situ Production of Oil from Oil Shale	Marriott	Salon D
Monday	6:00 PM	190ac	Estimation of Vapor Pressure of Heavy Hydrocarbons Using Molar Refraction	PNCC	Exhibit Hall A
Monday	6:00 PM	187q	Hydrate Formation of Water Droplet In Hydrocarbon Phase	PNCC	Exhibit Hall A
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	198a	Computational Comparison of Piecewise Linearization Schemes in Gas Lifting and Pooling Optimization Problems	PNCC	Room 202-B
Tuesday	8:30 AM	249f	Open Discussion, "Overcoming Barriers to Smart Manufacturing Plants"	PNCC	Room 201-A
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	314c	Mastering Simultaneous Reaction and Diffusion through Single Event Microkinetic Modeling of N-Alkane Hydroconversion on Pt/H-Zsm-5	PNCC	Room 102-B
Tuesday	12:30 PM	325g	One Hundred Years of Refining Catalysts	Marriott	Salon E
Tuesday	3:15 PM	340b	Design, Characterization and Application of a Hyperbranched Aminosilica (HAS) High-Capacity Sorbent for CO ₂ Capture from Flue Gas	Marriott	Salon I
Wednesday	8:30 AM	417j	Miscible Viscous Fingering In Three Dimensions:Fractal to Compact Crossover and Interfacial Roughness:Pore-Level Simulations	PNCC	Room 104-A
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday	12:30 PM	486a	Toward the Reproducible Intrinsic Kinetic Measurement in Multi-Phase Microreactors	PNCC	Room 303-B
Thursday	8:30 AM	597c	Particle Size Optimization for Syngas Chemical Looping Process	Loews	Washington B Room
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	3:15 PM	686e	Coal Direct Chemical Looping (CDCL) Process	Marriott	Salon K
Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Friday	8:00 AM	734d	Study on Gas Combustions In a Downhole Steam Generator by Reactive Dynamics Simulations	PNCC	Room 103-A

NATURAL GAS

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5ah	Molecularly Engineered Nanoporous Adsorbents: Synthesis, Characterization, and Application	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ba	The Development and Reactivity of Oxide Phases on Pd(111) Utilizing Gas Phase Oxygen Atom Beams In Ultra High Vacuum	PNCC	Exhibit Hall A
Monday	8:30 AM	38b	Channel Formation by Turbidity Currents: Navier-Stokes Based Linear Stability Analysis	PNCC	Room 104-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	8:30 AM	54h	Cubic-Plus-Association (CPA) Equation of State for Water-Containing Mixtures	PNCC	Room 103-C
Monday	8:30 AM	32a	Defect-Free Composite Pd Membranes with High Temperature Long-Term Stability	Loews	Congress A Room
Monday	8:30 AM	32c	Demonstration of Steam Methane Reforming In a Membrane Reactor for Hydrogen Production	Loews	Congress A Room
Monday	8:30 AM	21a	Industrial Perspectives In H ₂ Generation through Short Contact Time - Catalytic Partial Oxidation Technologies	PNCC	Room 203-A
Monday	8:30 AM	24d	Intra-Particle Diffusion/reaction Modeling for Strongly Endothermic Reactions In Low-N Tubes with Cfd	PNCC	Room 203-B
Monday	8:30 AM	23f	Metal-Support Interactions In High-Temperature Stabilized Nanocomposites	PNCC	Room 202-A
Monday	8:30 AM	47b	Rapid Fabrication of Metal Organic Framework Thin Films Using Microwave-Induced Thermal Deposition	PNCC	Room 202-B
Monday	8:30 AM	21d	Steam and Dry Reforming and Partial Oxidation of Methane on Rh. A Comprehensive Kinetics Study	PNCC	Room 203-A
Monday	8:30 AM	47d	Synthesis of Highly C-Oriented AlPO ₄₋₅ Membranes	PNCC	Room 202-B
Monday	8:30 AM	45b	Tailoring the Pore Morphology of Pure and Mixed La- and Ce-Oxides	Marriott	Franklin 10
Monday	12:30 PM	67b	Advances in Process Synthesis - Energy & Environment	PNCC	Room 201-B
Monday	12:30 PM	63f	CO ₂ Adsorption on Mesoporous Porous Silica Surfaces Containing Amine-Like Motifs	Marriott	Salon I
Monday	12:30 PM	123h	Catalytic CO ₂ Recycle (CCR) Technology	Marriott	Salon C
Monday	12:30 PM	75b	Cfd Analysis of the Zoneflow(TM) Reactor for Methane Steam Reforming	PNCC	Room 203-A
Monday	12:30 PM	118c	Cfd Simulation and Modeling of Conduction Heat Transfer at the Wall of a Packed Reactor Tube	PNCC	Exhibit Hall A
Monday	12:30 PM	63a	Interactions of SO ₂ and H ₂ S with Modified Amorphous Carbon Films	Marriott	Salon I
Monday	12:30 PM	79f	Kinetic Modeling of Oxidation Methane Conversion in Regime of Filtration Combustion with Superadiabatic Heating	PNCC	Room 203-B
Monday	12:30 PM	111a	Membrane Module Design	Loews	Congress A Room
Monday	12:30 PM	67a	Model-Based Innovations In Process Development and Design	PNCC	Room 201-B
Monday	12:30 PM	106d	Modeling of Heavy Oils Under Wide Range of Conditions with the Friction Theory	Marriott	Salon D
Monday	12:30 PM	86h	Natural Gas Based Hydrogen Production with No Carbon Dioxide Emissions	Marriott	Salon B
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	86f	Pre- and Post-Combustion Carbon Capture Using Metal-Organic Framework Adsorbents	Marriott	Salon B
Monday	12:30 PM	75e	Reactor Temperature Profile during Catalytic Partial Oxidation on Rh/Al ₂ O ₃ Catalyst In a Reverse Flow Reactor	PNCC	Room 203-A
Monday	12:30 PM	85d	Theoretical Prediction of Effective Thermodiffusion Coefficient In Porous Media	PNCC	Room 109-B
Monday	12:30 PM	63e	Two-Dimensional Equation-of-State Modeling of Adsorption of Coalbed Methane Gases	Marriott	Salon I
Monday	3:15 PM	153b	Alkane Cracking and Dehydrogenation In Zeolites	PNCC	Room 102-A
Monday	3:15 PM	155c	Catalysis and Reaction Engineering: Sites, Pellets, and Reactors	Loews	Lescaze Room

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Monday	3:15 PM	184h	Molecular Chemisorption of O ₂ on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Monday	3:15 PM	169a	Novel Catalysts for Selective Oxidation of Lower Alkanes	PNCC	Room 202-B
Monday	3:15 PM	184e	Reactivity of Epitaxial Vanadia on TiO ₂ : Are Support Interactions	Loews	Commonwealth D
Monday	3:15 PM	143a	The Role of Mathematical Programming in the Evolution from Planning and Scheduling towards Enterprise-Wide Optimization	PNCC	Room 204-A
Monday	6:00 PM	185d	Ceria-Based Oxides for Catalysis Applications Investigated by the DFT+U Approach	PNCC	Exhibit Hall A
Monday	6:00 PM	187q	Hydrate Formation of Water Droplet In Hydrocarbon Phase	PNCC	Exhibit Hall A
Monday	6:00 PM	186r	Novel Size Measurement Method for Individual and Overlapped Bubble Images	PNCC	Exhibit Hall A
Tuesday	8:30 AM	240a	A Metric for Monitoring Mpc Optimization Strategy	PNCC	Room 202-A
Tuesday	8:30 AM	192d	Advances In Computational Catalysis: Past, Present and Future	Loews	Commonwealth B
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	218d	Application Vapor Dispersion Model of Natural Gas and Liquid Natural Gas (LNG) System to Estimate the Methane Gas Emission and Establish Correlation Between the Temperature and Concentration of the Dispersed Gas	Marriott	Salon D
Tuesday	8:30 AM	198a	Computational Comparison of Piecewise Linearization Schemes in Gas Lifting and Pooling Optimization Problems	PNCC	Room 202-B
Tuesday	8:30 AM	200g	Development of a New Synthesis Gas Production Catalyst and Process	Loews	Commonwealth D
Tuesday	8:30 AM	215a	Distributed Optimization and Control of Offshore Oil Production: The Intelligent Platform	PNCC	Room 203-A
Tuesday	8:30 AM	249c	Event Early Warning & Semantic Model In Smart Manufacturing	PNCC	Room 201-A
Tuesday	8:30 AM	249f	Open Discussion, "Overcoming Barriers to Smart Manufacturing Plants"	PNCC	Room 201-A
Tuesday	8:30 AM	320c	Property and Process Modeling of Aqueous Ammonia Processes for Post-Combustion Carbon Dioxide Capture	PNCC	Room 103-C
Tuesday	8:30 AM	249e	Smart Manufacturing Plants: Advances and Priorities	PNCC	Room 201-A
Tuesday	8:30 AM	249b	The Evolution of the Smart Plant In the Industrial Gas Business	PNCC	Room 201-A
Tuesday	12:30 PM	325b	A Century of Petrochemical Advances	Marriott	Salon E
Tuesday	12:30 PM	325a	A Hundred Year Historical View of Energy, An Essential Pillar for the Progress of Humanity	Marriott	Salon E
Tuesday	12:30 PM	293d	A Physical Absorption Process for the Capture of CO ₂ from CO ₂ -Rich Natural Gas Streams Using Hydrocarbon Solvents, with Post-Capture CO ₂ Re-Compression	PNCC	Room 201-B
Tuesday	12:30 PM	274e	Contaminant Tolerant Catalysts for High Temperature Membrane Wgs Reaction	PNCC	Room 103-A
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	274b	Effect of Reaction Temperature on the Performance of Thermal Swing Sorption Enhanced Reaction Process for Simultaneous Production of Fuel Cell Grade H ₂ and Compressed CO ₂ from Synthesis Gas	PNCC	Room 103-A
Tuesday	12:30 PM	252d	Fluid-Phase Properties Using Direct Calculation of Cluster Integrals	PNCC	Room 103-C
Tuesday	12:30 PM	267e	Incorporation of Reaction Kinetics into a Multiphase, Hydrodynamic Model of a Fischer Tropsch Slurry Bubble Column Reactor	PNCC	Room 113-B
Tuesday	12:30 PM	291e	Past, Present, and Future of Gas to Liquids Technology	Loews	Washington C Room
Tuesday	12:30 PM	259c	Surface Science Studies of Metal Oxides	Loews	Commonwealth B

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Tuesday	3:15 PM	327a	A Look at the Advances In Catalysis Over the Past Century and Thoughts on the Challenges for the Future	Loews	Commonwealth B
Tuesday	3:15 PM	340a	Adsorption of Carbon Dioxide on Modified SBA-15	Marriott	Salon I
Tuesday	3:15 PM	340b	Design, Characterization and Application of a Hyperbranched Aminosilica (HAS) High-Capacity Sorbent for CO ₂ Capture from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	330f	Economic and Environmental Analysis of Hydrogen Production Strategies	PNCC	Room 113-B
Tuesday	3:15 PM	343c	Modeling and Dynamic Simulation of An Industrial Natural Gas Processing Unit Considering Environmental and Economic Impacts	PNCC	Room 203-A
Tuesday	3:15 PM	343d	Optimal Flow Assurance Policies for Hydrate Prevention In Deep-Water Gas Production Systems	PNCC	Room 203-A
Tuesday	3:15 PM	335c	Stability and Kinetic Study of Barium Manganese Hexa-Aluminate Combustion Catalysts	PNCC	Room 103-A
Wednesday	8:30 AM	438b	Flare Minimization for Chemical Process Industry Sustainability	Loews	Washington A Room
Wednesday	8:30 AM	417j	Miscible Viscous Fingering In Three Dimensions:Fractal to Compact Crossover and Interfacial Roughness:Pore-Level Simulations	PNCC	Room 104-A
Wednesday	8:30 AM	403e	Support Effects on the Catalytic Properties of Pt-Au Bimetallic Nanoparticles. A Multi-Scale Simulation Study	Marriott	Room 401/402
Wednesday	8:30 AM	399a	Syngas Chemical Looping Process	Loews	Congress B Room
Wednesday	8:30 AM	452f	The Adsorption of Water on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Wednesday	8:30 AM	410a	Using Nuclear Magnetic Resonance to Measure Emulsion Properties In Water In Oil Emulsions during Methane Hydrate Formation	PNCC	Room 108-A
Wednesday	12:30 PM	472a	Hollow Fiber Membrane Contactor for Characterization of Gas/solvents Thermodynamics and Mass Transfer Properties	Loews	Washington B Room
Wednesday	12:30 PM	481f	Hollow-Fiber-Based Adsorbent System for CO ₂ Capture from Flue Gas	PNCC	Room 113-B
Wednesday	12:30 PM	490h	Molecular Simulation of CO ₂ and CO ₂ /CH ₄ Mixture Adsorption and Diffusion In Metal-Organic Frameworks	Marriott	Salon I
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday	12:30 PM	477d	Using Quantitative Modeling of Molecular Transport to Accelerate Development of Membranes for Gas Separations	Loews	Congress B Room
Wednesday	3:15 PM	534d	Achieving Energy Reductions Via a Global Energy Management System	PNCC	Room 202-A
Wednesday	3:15 PM	544d	Butane Isomers Separation Using Zsm-5 Nanoparticles and 6FDA-Dam Mixed Matrix Membrane	Loews	Washington B Room
Wednesday	3:15 PM	543b	Cyclic Hybrid Adsorbent-Membrane Reactor (HAMR) Studies for Hydrogen Production	Loews	Congress A Room
Wednesday	3:15 PM	523b	The University Power Plant: A Readily Accessible Remote Learning Platform	Marriott	Salon K
Wednesday	6:00 PM	575af	Effect of Heterogeneities In Activity on Pattern Formation In Catalytic Reactors	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577r	Monitoring, Detection and Diagnosis of Leaks from Gas Pipes Based on Real-Time Data Collected Over the Ubiquitous Sensor Network	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ag	Multi-Mode Low-Dimensional Models for Real Time Simulation of Monolithic Catalytic Reactors	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578f	Numerical Analysis of a Pilot-Scale Fixed Bed Reactor for Dimethyl Ether (DME) Synthesis	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578a	Operation and/or Design of Sustainable Processes Using Multi-Objective Optimization	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Wednesday	6:00 PM	575l	Quantitative Correlation Between the Acidity and the Catalytic Activity for the Methanol Dehydration	PNCC	Exhibit Hall A
Thursday	8:30 AM	596g	Ab Initio and Molecular Simulation of Viscoelastic Surfactants Solutions: Effect of Counter Ions	PNCC	Room 106-B
Thursday	8:30 AM	582e	Carbon Dioxide Reforming of Methane to Synthesis Gas Over Nickel Incorporated Ni-Mcm-41 Catalysts	PNCC	Room 102-A
Thursday	8:30 AM	614d	Computational Strategies for the Planning of Deepwater Oilfield Infrastructure Under Decision Dependent Uncertainty	PNCC	Room 203-A
Thursday	8:30 AM	597c	Particle Size Optimization for Syngas Chemical Looping Process	Loews	Washington B Room
Thursday	8:30 AM	586g	Towards the Sustainable Use of Seawater for Process Cooling	Marriott	Room 502
Thursday	12:30 PM	627a	Adsorption and Diffusion of Gases In ETS-10 and Mof Adsorbents	Marriott	Salon J
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	641d	Incipient Fault Detection In Offshore Oil and Gas Production Platforms: Hybrid Electro-Mechanical Monitoring of Rotating Equipment	PNCC	Room 204-C
Thursday	12:30 PM	645i	Measuring Vapor Liquid Equilibria of Sour Gases and Glycol Aqueous Solutions Using a Combined Static Technique	PNCC	Room 103-C
Thursday	12:30 PM	645a	Phase Diagrams of Methanol and Alkane Binary Systems In the Field of Natural Gas Fractionators: Experimental Work and Modeling	PNCC	Room 103-C
Thursday	12:30 PM	627f	Pre-Combustion CO ₂ Capture at High Temperature with Alkaline Promoted Aluminas and Hydrotalcites: The Crucial Role of Alkaline Cations In CO ₂ Adsorption	Marriott	Salon J
Thursday	12:30 PM	668b	Rational Design of Hierarchically Structured Porous Catalysts and Its Application to Autothermal Reforming for Fuel Cells	Marriott	Room 309/310
Thursday	12:30 PM	631h	Temperature Effects on the Fuel Reactor Behavior of a Chemical Looping Combustion System	Marriott	Salon K
Thursday	12:30 PM	631g	Use of Ionic Liquids as Physical Solvents for Selective Capture of CO ₂ from Fuel Gas Streams	Marriott	Salon K
Thursday	12:30 PM	645b	Vapor-Liquid Equilibria of Organic Sulfur Species (n-Propylmercaptan, n-Butylmercaptan and Dimethylsulfide) in Mdea Aqueous Solution in the Presence of Acid Gases	PNCC	Room 103-C
Thursday	3:15 PM	690f	A Novel Method for the Performance Analysis of a Molten Carbonate Fuel Cell	PNCC	Room 111-B
Thursday	3:15 PM	699e	Asymmetric Membrane Formation by Hollow Fiber Spinning - Theory and Experiment	Loews	Congress B Room
Thursday	3:15 PM	686f	Calcium Looping Process for Hydrogen, Electricity and Liquid Fuel Production with In-Situ Carbon Dioxide and Sulfur Capture	Marriott	Salon K
Thursday	3:15 PM	686e	Coal Direct Chemical Looping (CDCL) Process	Marriott	Salon K
Thursday	3:15 PM	675a	Computational Design of Metal-Organic Frameworks for the Adsorption of CO ₂	Marriott	Salon J
Thursday	3:15 PM	691g	Design and Optimization of Micro Reactor-Heat Exchanger Cascade Configurations for Autothermal Conversion of Iso-Octane to Hydrogen	PNCC	Room 102-A
Thursday	3:15 PM	686c	Effect of Sulfur Contaminants on the Performance of Oxygen Carriers In Chemical Looping Combustion	Marriott	Salon K

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	688g	Fractal Scaling In Crude Oil Price Evolution Via Time Series Analysis of Historical Data	PNCC	Room 203-B
Thursday	3:15 PM	675g	Metal-Organic Aerogels-a New Kind of Porous Material	Marriott	Salon J
Thursday	3:15 PM	686b	Ni/La-Al ₂ O ₃ Oxygen Carrier for Fluidized Bed Chemical-Looping Combustion	Marriott	Salon K
Thursday	3:15 PM	694e	Process Integration and Optimization of Hydrogen Production Strategies	Loews	Howe Room
Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Thursday	6:00 PM	719b	Generalized Sld-PR Adsorption Model for Pure and Mixed Gases on Coal Matrices	PNCC	Exhibit Hall A
Thursday	6:00 PM	719o	Production of Ammonia with Pressure Swing Adsorption Utilized In Key Separation Steps	PNCC	Exhibit Hall A
Friday	8:00 AM	735a	Anomalous Self-Preservation of Surfactant-Derived Gas Hydrates at 1 Atm	PNCC	Room 109-B
Friday	8:00 AM	727c	Catalyst Docking Stations on Carbon Nanotubes Used In Fischer-Tropsch Synthesis	PNCC	Room 104-B
Friday	8:00 AM	735f	Effectiveness of Biosurfactant and Quaternary Ammonium Salt as Hydrate Anti-Agglomerants: Effect of Model Oil Concentration, Methanol as Co-Surfactant, and Salinity	PNCC	Room 109-B
Friday	8:00 AM	740a	Kinetic Phenomena In Low-Temperature CO Oxidation on Nanostructured Pt Catalysts	PNCC	Room 102-A
Friday	8:00 AM	733d	Peninsular Malaysia Operation Gas Fields Flow Network Optimization Model	PNCC	Room 202-B
Friday	8:00 AM	727d	Prospect of Success In Scaling-up Fischer-Tropsch Synthesis Reactor Operates In near-Critical and Supercritical Phase Media	PNCC	Room 104-B
Friday	8:00 AM	735b	Role of Sodium Dodecyl Sulfate at Hydrate/liquid Interface	PNCC	Room 109-B
Friday	8:00 AM	727b	Silica-Supported Cobalt Catalysts for Fischer-Tropsch Synthesis: Effect of Support Surface Area, Calcination Temperature and Preparation Medium	PNCC	Room 104-B
Friday	10:45 AM	760f	An STM Study of High-Coverage Structures of Atomic Oxygen on Pt(111)	Marriott	Room 309/310
Friday	10:45 AM	772d	Athermal Contribution to the Excess Entropy in the Long Chain Limit	PNCC	Room 103-B
Friday	10:45 AM	761c	Cfd Modeling Gas-Solid Flows in Fcc Riser Reactors: Simulation Using Kinetic Theory in a Fully Developed Flow	PNCC	Room 202-B
Friday	10:45 AM	758b	Comparison of the Kinetics of the Fischer-Tropsch Synthesis Reaction Between Alumina and Silica Supported Cobalt Catalysts as a Function of Metal Loading	PNCC	Room 104-B
Friday	10:45 AM	772g	Compressible Lattice Model for CO ₂ + Cosolvent + Polymer Systems	PNCC	Room 103-B
Friday	10:45 AM	761a	Design of a Multi-Tube Membrane Reformer for Methane Steam Reforming	PNCC	Room 202-B
Friday	10:45 AM	768c	Electrochemical Performance of Direct Carbon Fuel Cell Based on Molten Carbonate Eutectic Electrolytes	PNCC	Room 111-B
Friday	10:45 AM	762e	Equilibrium Path Sampling Study of Methane Diffusion In Natural Gas Hydrates	PNCC	Room 103-A
Friday	10:45 AM	758a	Hydrocarbon Formation Model of Slurry-Phase Fischer-Tropsch Synthesis	PNCC	Room 104-B
Friday	10:45 AM	764b	Selective Gas Metal Oxide Sensors: Fabrication of Multilayers by In-Situ Nanoparticle Aerosol Deposition	PNCC	Room 113-A
Friday	10:45 AM	758d	The Use of Isotopic Labels In Understanding CO/H ₂ Reactions	PNCC	Room 104-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



COAL					
Day	Time	Paper #	Paper Title	Property	Room
Monday	8:30 AM	54d	A New Model for the Solubility of Sulphur Dioxide in Aqueous Solutions at Higher Ionic Strength	PNCC	Room 103-C
Monday	8:30 AM	55c	Cavitation In Metastable Nanoconfined Fluids	Marriott	Room 414/415
Monday	8:30 AM	32a	Defect-Free Composite Pd Membranes with High Temperature Long-Term Stability	Loews	Congress A Room
Monday	8:30 AM	32c	Demonstration of Steam Methane Reforming In a Membrane Reactor for Hydrogen Production	Loews	Congress A Room
Monday	8:30 AM	29a	Dual-Mode Monolithic Catalysts Formulated for Removal of Hydrogen Sulfide and Reduced Formation of Cos In Coal Gases	PNCC	Room 103-A
Monday	8:30 AM	23f	Metal-Support Interactions In High-Temperature Stabilized Nanocomposites	PNCC	Room 202-A
Monday	8:30 AM	28d	Rheological Behavior of Quasi-Static Granular Flows Under Unsteady Simple Shear	Loews	Congress C Room
Monday	8:30 AM	11d	Waste Coal Beneficiation with High Efficient Flotation Process	Marriott	Franklin 12
Monday	12:30 PM	123f	A Practical Route for Greening of Coal	Marriott	Salon C
Monday	12:30 PM	67b	Advances in Process Synthesis - Energy & Environment	PNCC	Room 201-B
Monday	12:30 PM	63f	CO2 Adsorption on Mesoporous Porous Silica Surfaces Containing Amine-Like Motifs	Marriott	Salon I
Monday	12:30 PM	123h	Catalytic CO2 Recycle (CCR) Technology	Marriott	Salon C
Monday	12:30 PM	87a	Computation of Turbulence and Low Sherwood Numbers In Fluidized Beds	Loews	Congress B Room
Monday	12:30 PM	123b	Effects of Quench Rate, NO, and Quartz Surface Area on Gas Phase Oxidation of Mercury by Bromine	Marriott	Salon C
Monday	12:30 PM	123e	Enhancement of the Desulfurization Performances of Waste Cement Particles by Acid Treatment	Marriott	Salon C
Monday	12:30 PM	123g	High Temperature Adsorption of Mercury on Non-Carbon Based Sorbents	Marriott	Salon C
Monday	12:30 PM	63a	Interactions of SO2 and H2S with Modified Amorphous Carbon Films	Marriott	Salon I
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	86f	Pre- and Post-Combustion Carbon Capture Using Metal-Organic Framework Adsorbents	Marriott	Salon B
Monday	12:30 PM	123a	Solvent Extraction of Low Grade Coals for Clean Liquid Fuels	Marriott	Salon C
Monday	12:30 PM	87f	The Effect of Bed Depth on the Hydrodynamics of a Fluidized Bed of Fcc Catalyst	Loews	Congress B Room
Monday	12:30 PM	63e	Two-Dimensional Equation-of-State Modeling of Adsorption of Coalbed Methane Gases	Marriott	Salon I
Monday	3:15 PM	171a	Bifunctional Monolithic Catalysts for User Defined Fischer Tropsch Products	PNCC	Room 103-B
Monday	3:15 PM	155c	Catalysis and Reaction Engineering: Sites, Pellets, and Reactors	Loews	Lescaze Room
Monday	3:15 PM	167f	Coagulation of Charged Nanoparticles: Refined Classical Approach and Its Limits	Marriott	Salon C
Monday	3:15 PM	184h	Molecular Chemisorption of O2 on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Monday	6:00 PM	185d	Ceria-Based Oxides for Catalysis Applications Investigated by the DFT+U Approach	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	6:00 PM	190ac	Estimation of Vapor Pressure of Heavy Hydrocarbons Using Molar Refraction	PNCC	Exhibit Hall A
Monday	6:00 PM	187aj	The Adsorption of Mercury-Species on Fixed and Ruffled Calcium Oxide (0 0 1) Surfaces Investigated by Density Functional Theory	PNCC	Exhibit Hall A
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	221f	Colloidal Forces and Hydrodynamic Drainage Between Micro-Bubbles Measured Using Atomic Force Microscopy	PNCC	Room 307-A
Tuesday	8:30 AM	249c	Event Early Warning & Semantic Model In Smart Manufacturing	PNCC	Room 201-A
Tuesday	8:30 AM	320c	Property and Process Modeling of Aqueous Ammonia Processes for Post-Combustion Carbon Dioxide Capture	PNCC	Room 103-C
Tuesday	12:30 PM	299a	Calibration of DEM Material Models	Loews	Congress C Room
Tuesday	12:30 PM	265a	Catalytic Effects of Minerals Matters on Stable Surface Oxides and Oxidation Rate In the Early Stage of Coal Combustion	Marriott	Salon D
Tuesday	12:30 PM	274e	Contaminant Tolerant Catalysts for High Temperature Membrane Wgs Reaction	PNCC	Room 103-A
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	274b	Effect of Reaction Temperature on the Performance of Thermal Swing Sorption Enhanced Reaction Process for Simultaneous Production of Fuel Cell Grade H2 and Compressed CO2 from Synthesis Gas	PNCC	Room 103-A
Tuesday	12:30 PM	314d	First Principles Reaction Path Analysis of the Fischer-Tropsch Initiation and Chain Growth Mechanism	PNCC	Room 102-B
Tuesday	12:30 PM	325e	Gasification at a Crossroad	Marriott	Salon E
Tuesday	12:30 PM	267e	Incorporation of Reaction Kinetics into a Multiphase, Hydrodynamic Model of a Fischer Tropsch Slurry Bubble Column Reactor	PNCC	Room 113-B
Tuesday	12:30 PM	291e	Past, Present, and Future of Gas to Liquids Technology	Loews	Washington C Room
Tuesday	3:15 PM	372b	A Graphical Approach to Improving Gasification	PNCC	Room 201-B
Tuesday	3:15 PM	340b	Design, Characterization and Application of a Hyperbranched Aminosilica (HAS) High-Capacity Sorbent for CO2 Capture from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	340c	Development of Sulfur Tolerant High Durability CO2 Sorbents at High Temperatures	Marriott	Salon I
Tuesday	3:15 PM	330f	Economic and Environmental Analysis of Hydrogen Production Strategies	PNCC	Room 113-B
Tuesday	3:15 PM	335a	Gallium-Incorporated Mfi Zeolites for Enhanced Aromatics Production Under Fischer-Tropsch Conditions	PNCC	Room 103-A
Tuesday	3:15 PM	340e	Metal Organic Frameworks for Carbon Dioxide Adsorption from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	340f	Pressure Swing Adsorption Cycles for Carbon Dioxide Capture	Marriott	Salon I
Tuesday	3:15 PM	330d	Supercritical Phase Fischer Tropsch Synthesis from Coal Derived Syngas	PNCC	Room 113-B
Wednesday	8:30 AM	449e	A Master of Engineering Program in Energy Economics and Engineering at Cornell University	Loews	Lescaze Room
Wednesday	8:30 AM	417j	Miscible Viscous Fingering In Three Dimensions:Fractal to Compact Crossover and Interfacial Roughness:Pore-Level Simulations	PNCC	Room 104-A
Wednesday	8:30 AM	399a	Syngas Chemical Looping Process	Loews	Congress B Room
Wednesday	8:30 AM	452f	The Adsorption of Water on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Wednesday	12:30 PM	505f	CO2 Capture by Moving Bed Temperature Swing Adsorption	Marriott	Salon K
Wednesday	12:30 PM	481f	Hollow-Fiber-Based Adsorbent System for CO2 Capture from Flue Gas	PNCC	Room 113-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	12:30 PM	454c	Modeling the Ultrasonic Cavitation-Enhanced Removal of Nitric Oxide from Flue Gases In a Bubble Column Reactor	Marriott	Salon B
Wednesday	12:30 PM	490h	Molecular Simulation of CO ₂ and CO ₂ /CH ₄ Mixture Adsorption and Diffusion In Metal-Organic Frameworks	Marriott	Salon I
Wednesday	12:30 PM	454b	Optimization of the Ultrasonic Cavitation-Induced Removal of Nitric Oxide from Flue Gases Using Taguchi Statistical Experimental Design Methodology	Marriott	Salon B
Wednesday	12:30 PM	471c	Passivity Based Modeling and Control of Coal Power Plants	PNCC	Room 203-A
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday	12:30 PM	495e	The Use of Discrete Element Modeling (DEM) and Computational Fluid Dynamics (CFD) for Analysis of Solid-Fluid Mixing	PNCC	Room 113-C
Wednesday	12:30 PM	512a	Uncertainty Analysis of An Igcc System with Single-Stage Entrained-Flow Gasifier	Loews	Lescaze Room
Wednesday	12:30 PM	477d	Using Quantitative Modeling of Molecular Transport to Accelerate Development of Membranes for Gas Separations	Loews	Congress B Room
Wednesday	3:15 PM	552d	Heterogeneous and Homogeneous Mercury Speciation Under O ₂ -CO ₂ Coal Combustion	Marriott	Salon D
Wednesday	3:15 PM	552c	Modeling, Construction and Operation of An Integrated Pollutant Removal Process at An Oxy-Combustion Test Facility	Marriott	Salon D
Wednesday	3:15 PM	552a	Oxy-Coal Combustion: Effects of PO ₂ on Coal Jet Stability In O ₂ /CO ₂ Environments	Marriott	Salon D
Wednesday	3:15 PM	552f	Oxycoal Firing In Circulating Fluidized Bed Boilers	Marriott	Salon D
Wednesday	3:15 PM	552e	Oxygen Sorbents for Oxy-Fuel Combustion	Marriott	Salon D
Wednesday	3:15 PM	522a	Reactor Analysis of Coal Pyrolysis to Acetylene In Hydrogen Plasma Reactor	Loews	Congress B Room
Wednesday	3:15 PM	552b	Role of Recycle on Emissions from Oxy-Coal Combustion	Marriott	Salon D
Wednesday	6:00 PM	575ax	An Investigation of the Effect of Mass Transfer on the Product Selectivity In Fischer-Tropsch Synthesis	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ap	Hydrodynamic and Mass Transfer Parameters of Gases in Organic Liquids Under Fischer-Tropsch Conditions	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577h	Minimization Under Uncertainty of Fresh Water Consumption for Pulverized Carbon (PC) and Integrated Gasification Combined-Cycle (IGCC) Power Plants	PNCC	Exhibit Hall A
Thursday	8:30 AM	592a	Comparison of Coal Based Hydrogen and Electricity Generation Process Under a Carbon Constrained Scenario	PNCC	Room 201-B
Thursday	8:30 AM	600a	Hydrogen Adsorption In Thin Films of Prussian Blue Analogue	PNCC	Room 103-C
Thursday	8:30 AM	599c	Magnesian Calcite Sorbent for Carbon Dioxide Capture during Hydrogen Production from Fossil Fuels	Loews	Howe Room
Thursday	8:30 AM	597c	Particle Size Optimization for Syngas Chemical Looping Process	Loews	Washington B Room
Thursday	12:30 PM	652a	A Dynamic Model for a Cupola Furnace	Loews	Lescaze Room
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	631a	Comparison of Processes for Separation and Sequestration of CO ₂ from the Combustion of Coal	Marriott	Salon K

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	12:30 PM	631e	Demonstration of Carbon Dioxide Capture from Coal-Fired Flue Gas Using Calcium-Based Sorbents	Marriott	Salon K
Thursday	12:30 PM	646f	Elemental Mercury Adsorption Study on Gehlenite (Ca ₂ Al ₂ SiO ₇)	PNCC	Room 106-B
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	627c	High Temperature Air Separation by Perovskite-Type Oxide Sorbents-Heat Effect Minimization	Marriott	Salon J
Thursday	12:30 PM	631b	Modeling CO ₂ Capture In Amine Solvents with An Advanced Association Model: Process Optimisation and a Platform for Solvent Design	Marriott	Salon K
Thursday	12:30 PM	627f	Pre-Combustion CO ₂ Capture at High Temperature with Alkaline Promoted Aluminas and Hydrotalcites: The Crucial Role of Alkaline Cations In CO ₂ Adsorption	Marriott	Salon J
Thursday	12:30 PM	627b	Temperature and Pressure Dependent Non-Equilibrium Kinetic Model That Describes the Adsorption Behavior of CO ₂ In K-Promoted Htlc	Marriott	Salon J
Thursday	12:30 PM	631g	Use of Ionic Liquids as Physical Solvents for Selective Capture of CO ₂ from Fuel Gas Streams	Marriott	Salon K
Thursday	3:15 PM	690f	A Novel Method for the Performance Analysis of a Molten Carbonate Fuel Cell	PNCC	Room 111-B
Thursday	3:15 PM	676d	CO ₂ Sequestration: Temperature and Gas Compositional Effects on the Kinetics and Mineralogical Reactions	Marriott	Salon I
Thursday	3:15 PM	686f	Calcium Looping Process for Hydrogen, Electricity and Liquid Fuel Production with In-Situ Carbon Dioxide and Sulfur Capture	Marriott	Salon K
Thursday	3:15 PM	701c	Characterization of Sulfur Resistance of Pd-Au Hydrogen Separation Membranes Prepared by Galvanic Displacement	Loews	Congress A Room
Thursday	3:15 PM	686e	Coal Direct Chemical Looping (CDCL) Process	Marriott	Salon K
Thursday	3:15 PM	675a	Computational Design of Metal-Organic Frameworks for the Adsorption of CO ₂	Marriott	Salon J
Thursday	3:15 PM	686c	Effect of Sulfur Contaminants on the Performance of Oxygen Carriers In Chemical Looping Combustion	Marriott	Salon K
Thursday	3:15 PM	676b	Effects of Permeability Heterogeneity on CO ₂ Sequestration In Brine Formation	Marriott	Salon I
Thursday	3:15 PM	676c	Including Long-Range Electrostatic Interactions In Carbon Dioxide Sequestration Models	Marriott	Salon I
Thursday	3:15 PM	686a	Investigation of Chemical Looping Combustion of Coal Utilizing Various Oxygen Carriers	Marriott	Salon K
Thursday	3:15 PM	686b	Ni/La-Al ₂ O ₃ Oxygen Carrier for Fluidized Bed Chemical-Looping Combustion	Marriott	Salon K
Thursday	3:15 PM	694e	Process Integration and Optimization of Hydrogen Production Strategies	Loews	Howe Room
Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Thursday	3:15 PM	694d	Thermodynamic Evaluation of Processes for Hydrogen Production from Coal – Theoretical and Experimental Studies	Loews	Howe Room
Thursday	6:00 PM	718o	Absorption of CO ₂ on CaSiO ₃	PNCC	Exhibit Hall A
Thursday	6:00 PM	719b	Generalized Sld-PR Adsorption Model for Pure and Mixed Gases on Coal Matrices	PNCC	Exhibit Hall A
Friday	8:00 AM	727c	Catalyst Docking Stations on Carbon Nanotubes Used In Fischer-Tropsch Synthesis	PNCC	Room 104-B
Friday	8:00 AM	732b	High Throughput Methodology for Study of Surface Segregation	Marriott	Room 309/310

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Friday	8:00 AM	727d	Prospect of Success In Scaling-up Fischer-Tropsch Synthesis Reactor Operates In near-Critical and Supercritical Phase Media	PNCC	Room 104-B
Friday	8:00 AM	727a	Selective F-T Synthesis for the Production of Middle Distillates	PNCC	Room 104-B
Friday	8:00 AM	727b	Silica-Supported Cobalt Catalysts for Fischer-Tropsch Synthesis: Effect of Support Surface Area, Calcination Temperature and Preparation Medium	PNCC	Room 104-B
Friday	10:45 AM	761b	A Comparative Study of the Gasification Technology Versus Traditional Combustion Technologies for Power Generation In México	PNCC	Room 202-B
Friday	10:45 AM	760f	An STM Study of High-Coverage Structures of Atomic Oxygen on Pt(111)	Marriott	Room 309/310
Friday	10:45 AM	766f	CO ₂ Fixation by Nanoscale Galvanic Couples	PNCC	Room 102-A
Friday	10:45 AM	761d	Dynamics and Control of Air Separation Unit-Gas Turbine-Gasifier Integrated Power Cycle of Igcc Plants	PNCC	Room 202-B
Friday	10:45 AM	768c	Electrochemical Performance of Direct Carbon Fuel Cell Based on Molten Carbonate Eutectic Electrolytes	PNCC	Room 111-B
Friday	10:45 AM	758a	Hydrocarbon Formation Model of Slurry-Phase Fischer-Tropsch Synthesis	PNCC	Room 104-B
Friday	10:45 AM	758d	The Use of Isotopic Labels In Understanding CO/H ₂ Reactions	PNCC	Room 104-B

COAL BED METHANE

Day	Time	Paper #	Paper Title	Property	Room
Monday	8:30 AM	55c	Cavitation In Metastable Nanoconfined Fluids	Marriott	Room 414/415
Monday	12:30 PM	63a	Interactions of SO ₂ and H ₂ S with Modified Amorphous Carbon Films	Marriott	Salon I
Monday	12:30 PM	63e	Two-Dimensional Equation-of-State Modeling of Adsorption of Coalbed Methane Gases	Marriott	Salon I
Monday	3:15 PM	184h	Molecular Chemisorption of O ₂ on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Monday	6:00 PM	185d	Ceria-Based Oxides for Catalysis Applications Investigated by the DFT+U Approach	PNCC	Exhibit Hall A
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	3:15 PM	340b	Design, Characterization and Application of a Hyperbranched Aminosilica (HAS) High-Capacity Sorbent for CO ₂ Capture from Flue Gas	Marriott	Salon I
Wednesday	8:30 AM	417j	Miscible Viscous Fingering In Three Dimensions:Fractal to Compact Crossover and Interfacial Roughness:Pore-Level Simulations	PNCC	Room 104-A
Wednesday	8:30 AM	452f	The Adsorption of Water on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	3:15 PM	676c	Including Long-Range Electrostatic Interactions In Carbon Dioxide Sequestration Models	Marriott	Salon I

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	6:00 PM	719b	Generalized Sld-PR Adsorption Model for Pure and Mixed Gases on Coal Matrices	PNCC	Exhibit Hall A
Friday	8:00 AM	727b	Silica-Supported Cobalt Catalysts for Fischer-Tropsch Synthesis: Effect of Support Surface Area, Calcination Temperature and Preparation Medium	PNCC	Room 104-B
Friday	10:45 AM	760f	An STM Study of High-Coverage Structures of Atomic Oxygen on Pt(111)	Marriott	Room 309/310

TAR SANDS

Day	Time	Paper #	Paper Title	Property	Room
Monday	12:30 PM	87f	The Effect of Bed Depth on the Hydrodynamics of a Fluidized Bed of Fcc Catalyst	Loews	Congress B Room
Monday	6:00 PM	187ad	Charge Stabilization In Nonpolar Liquids	PNCC	Exhibit Hall A
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	325f	Past 100 Years of Refining and Future Expectations	Marriott	Salon E
Wednesday	8:30 AM	423c	Catalytic Cracking of Methylcyclohexane Over Fcc Catalysts In a Mini-Fluidized Crec Riser Simulator	PNCC	Room 303-B
Wednesday	8:30 AM	422b	Microscale Mixing of Mono- and Bi-Dispersed Microsphere Suspensions	PNCC	Room 104-B
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Thursday	6:00 PM	718e	Recovering Magnetic Powder from Sludge Discharged In Magnetic Separation Process from Oily Water at Oil Production Sites	PNCC	Exhibit Hall A

METHANE HYDRATES

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5a	Characterizing Water In Oil Emulsions with Application to Methane Hydrate Formation	PNCC	Exhibit Hall A
Monday	8:30 AM	54h	Cubic-Plus-Association (CPA) Equation of State for Water-Containing Mixtures	PNCC	Room 103-C
Monday	8:30 AM	49a	Dual Function Inhibitors for Methane Hydrate	Marriott	Salon D
Monday	12:30 PM	63a	Interactions of SO ₂ and H ₂ S with Modified Amorphous Carbon Films	Marriott	Salon I
Monday	6:00 PM	187q	Hydrate Formation of Water Droplet In Hydrocarbon Phase	PNCC	Exhibit Hall A
Monday	6:00 PM	190ao	Prediction of the Chemical Potential of Theoretical Empty Cavity Using MD Simulation	PNCC	Exhibit Hall A
Tuesday	8:30 AM	252h	A Global Optimization-Quantum Chemistry Approach for a Predictive Saft Equation for Mixtures	PNCC	Room 103-C
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	267b	Methane Gas Hydrate Equilibrium Inside Cylindrical Pores and Its Implications for Gas Production	PNCC	Room 113-B
Tuesday	12:30 PM	320b	Molecular Simulation of Clathrate Hydrates In Porous Media	PNCC	Room 103-C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	12:30 PM	291e	Past, Present, and Future of Gas to Liquids Technology	Loews	Washington C Room
Tuesday	3:15 PM	330g	Experimental Investigation of Methane Gas Production from Methane Hydrate	PNCC	Room 113-B
Tuesday	3:15 PM	343d	Optimal Flow Assurance Policies for Hydrate Prevention In Deep-Water Gas Production Systems	PNCC	Room 203-A
Wednesday	8:30 AM	410a	Using Nuclear Magnetic Resonance to Measure Emulsion Properties In Water In Oil Emulsions during Methane Hydrate Formation	PNCC	Room 108-A
Wednesday	12:30 PM	510g	Adsorption Isotherm of Sodium Dodecyl Sulfate In Hydrate Particles	Marriott	Room 414/415
Wednesday	12:30 PM	515a	Prediction of the Production Condition of Natural Gas from Hydrate Deposits	PNCC	Room 105-B
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Friday	8:00 AM	735a	Anomalous Self-Preservation of Surfactant-Derived Gas Hydrates at 1 Atm	PNCC	Room 109-B
Friday	8:00 AM	735f	Effectiveness of Biosurfactant and Quaternary Ammonium Salt as Hydrate Anti-Agglomerants: Effect of Model Oil Concentration, Methanol as Co-Surfactant, and Salinity	PNCC	Room 109-B
Friday	8:00 AM	735b	Role of Sodium Dodecyl Sulfate at Hydrate/liquid Interface	PNCC	Room 109-B
Friday	10:45 AM	762e	Equilibrium Path Sampling Study of Methane Diffusion In Natural Gas Hydrates	PNCC	Room 103-A

HYDROGEN PRODUCTION

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5ah	Molecularly Engineered Nanoporous Adsorbents: Synthesis, Characterization, and Application	PNCC	Exhibit Hall A
Monday	8:30 AM	32a	Defect-Free Composite Pd Membranes with High Temperature Long-Term Stability	Loews	Congress A Room
Monday	8:30 AM	32c	Demonstration of Steam Methane Reforming In a Membrane Reactor for Hydrogen Production	Loews	Congress A Room
Monday	8:30 AM	21g	Desulfurization of Refinery off-Gases for Hydrogen Production	PNCC	Room 203-A
Monday	8:30 AM	25a	Evolution and Revolution: Process Innovations In Aromatics Technology	Loews	Commonwealth A1
Monday	8:30 AM	32b	High Purity Hydrogen Generation from Methanol Steam Reforming Using Pd-Based Membrane Reactors	Loews	Congress A Room
Monday	8:30 AM	21a	Industrial Perspectives In H ₂ Generation through Short Contact Time - Catalytic Partial Oxidation Technologies	PNCC	Room 203-A
Monday	8:30 AM	24d	Intra-Particle Diffusion/reaction Modeling for Strongly Endothermic Reactions In Low-N Tubes with Cfd	PNCC	Room 203-B
Monday	8:30 AM	47b	Rapid Fabrication of Metal Organic Framework Thin Films Using Microwave-Induced Thermal Deposition	PNCC	Room 202-B
Monday	8:30 AM	45b	Tailoring the Pore Morphology of Pure and Mixed La- and Ce-Oxides	Marriott	Franklin 10
Monday	12:30 PM	75d	Autothermal Reforming of Dodecane Over Ru-Ni-Based Aerogel and Xerogel Catalysts	PNCC	Room 203-A
Monday	12:30 PM	118c	Cfd Simulation and Modeling of Conduction Heat Transfer at the Wall of a Packed Reactor Tube	PNCC	Exhibit Hall A
Monday	12:30 PM	111a	Membrane Module Design	Loews	Congress A Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	75c	Morphological Study of Deposited Carbon Derived from Dodecane Reforming Over Ni-Based Monolith Catalysts	PNCC	Room 203-A
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	86f	Pre- and Post-Combustion Carbon Capture Using Metal-Organic Framework Adsorbents	Marriott	Salon B
Monday	12:30 PM	75a	Rhodium Supported on Thermally Enhanced Zeolite as Catalysts	PNCC	Room 203-A
Monday	3:15 PM	132b	Adsorption and Diffusion of Gases In Mof-5, Mof-177 and Zeolite 5A	Marriott	Salon I
Monday	3:15 PM	155c	Catalysis and Reaction Engineering: Sites, Pellets, and Reactors	Loews	Lescaze Room
Monday	3:15 PM	138a	Deactivation, Regeneration, and Stable Performance of a Platinum-Molybdenum-Rhenium Water Gas Shift Catalyst for on-Site Hydrogen Generation	PNCC	Room 203-A
Monday	3:15 PM	138c	Development of Precious Metal Modified Spc-Ni/mgal Catalyst for Hydrogen Station Application	PNCC	Room 203-A
Monday	3:15 PM	138d	Development of Wgs Catalyst for Hydrogen Station and Fuel Processor Applications	PNCC	Room 203-A
Monday	3:15 PM	179e	Gas Separation Membranes at Air Liquide/medal	Loews	Congress A Room
Monday	3:15 PM	138b	Kinetic Study of Water-Gas Shift Over Au-Ferrochrome Catalysts	PNCC	Room 203-A
Monday	3:15 PM	184h	Molecular Chemisorption of O ₂ on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Tuesday	8:30 AM	252h	A Global Optimization-Quantum Chemistry Approach for a Predictive Saft Equation for Mixtures	PNCC	Room 103-C
Tuesday	8:30 AM	240a	A Metric for Monitoring Mpc Optimization Strategy	PNCC	Room 202-A
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	219c	Miniature Reformer Design for Autothermal Reforming of Methanol to Generate Hydrogen for Portable Power Applications	PNCC	Room 113-C
Tuesday	8:30 AM	222f	Platinum Supported on Molybdenum Carbide for the Water-Gas Shift Reaction, a Theoretical and Experimental Study	PNCC	Room 102-A
Tuesday	8:30 AM	209e	Study of the Activity of Mo-Oxide Catalysts for the Reforming of Hydrocarbons	PNCC	Room 103-A
Tuesday	8:30 AM	209a	Water-Gas Shift Reaction on Metal Oxide Supported Palladium Catalysts	PNCC	Room 103-A
Tuesday	12:30 PM	325b	A Century of Petrochemical Advances	Marriott	Salon E
Tuesday	12:30 PM	325a	A Hundred Year Historical View of Energy, An Essential Pillar for the Progress of Humanity	Marriott	Salon E
Tuesday	12:30 PM	274e	Contaminant Tolerant Catalysts for High Temperature Membrane Wgs Reaction	PNCC	Room 103-A
Tuesday	12:30 PM	274b	Effect of Reaction Temperature on the Performance of Thermal Swing Sorption Enhanced Reaction Process for Simultaneous Production of Fuel Cell Grade H ₂ and Compressed CO ₂ from Synthesis Gas	PNCC	Room 103-A
Tuesday	12:30 PM	274c	Effect of Sulfur on Mo ₂ C-Supported Liquefied Petroleum Gas Steam Reforming Catalysts	PNCC	Room 103-A
Tuesday	12:30 PM	325e	Gasification at a Crossroad	Marriott	Salon E
Tuesday	12:30 PM	289d	Kinetic and Spectroscopic Investigation of the Water-Gas Shift Reaction on Supported Pt Catalysts	PNCC	Room 102-A
Tuesday	12:30 PM	259c	Surface Science Studies of Metal Oxides	Loews	Commonwealth B
Tuesday	12:30 PM	274a	Understanding Sulfur Poisoning and Carbon Deposition on Rh-Ni/Al ₂ O ₃ Catalysts during Steam Reforming of Logistic Fuels	PNCC	Room 103-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	3:15 PM	327a	A Look at the Advances In Catalysis Over the Past Century and Thoughts on the Challenges for the Future	Loews	Commonwealth B
Tuesday	3:15 PM	336a	Characterization of Pd-Based Membrane Fabricated by Surfactant Induced Electroless Plating (SIEP): Effect of Grain Size In Hydrogen Permeability	Loews	Congress A Room
Tuesday	3:15 PM	330f	Economic and Environmental Analysis of Hydrogen Production Strategies	PNCC	Room 113-B
Tuesday	3:15 PM	379e	Influence of Network Structural Modifications on the Dynamic Relaxation Characteristics of Crosslinked Poly(ethylene oxide) Copolymer Membranes	Marriott	Room 414/415
Tuesday	3:15 PM	336b	The Effect of Complexing Agents on the Electroless Pd-Ag Co-Deposition Bath Chemistry Using Linear Sweep Voltammetry for the Composite Membrane Synthesis	Loews	Congress A Room
Wednesday	8:30 AM	448f	Optimal Supply Chain Design with Multi-Echelon Stochastic Inventory and Risk-Pooling	PNCC	Room 204-B
Wednesday	8:30 AM	452f	The Adsorption of Water on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Wednesday	8:30 AM	403f	Theoretical and Experimental Studies of Hydrogen Production from Ammonia Decomposition	Marriott	Room 401/402
Wednesday	12:30 PM	469a	First Principles Investigation of Water Dissociation on Cu, Au, and Pt-Group Metals	Marriott	Room 401/402
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday	12:30 PM	477d	Using Quantitative Modeling of Molecular Transport to Accelerate Development of Membranes for Gas Separations	Loews	Congress B Room
Wednesday	3:15 PM	543b	Cyclic Hybrid Adsorbent-Membrane Reactor (HAMR) Studies for Hydrogen Production	Loews	Congress A Room
Wednesday	3:15 PM	526b	Enhancing the Capacity of Silver Based Adsorbents for Desulfurization of Liquid Hydrocarbon Fuels	Marriott	Salon J
Wednesday	3:15 PM	564d	Surface Nanostructure, Diffusion and Catalysis: The Role of Confinement and Surface Chemistry	PNCC	Room 105-B
Wednesday	6:00 PM	575u	Catalytic Combustion of Psa Residue Gas In Hydrogen Station Over Hexaaluminate Catalysts	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ah	Deactivation of a Platinum-Molybdenum-Rhenium Water Gas Shift Catalyst for on-Site Hydrogen Generation	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575k	Effect of Solvent on Noble Metals Over Hydrotalcite Catalysts	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575t	Hydrogen Production by Autothermal Reforming of Propane Over Ni/perovskite Catalysts Modified by Mo	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575au	One Body Composite of Catalyst and CO2 Absorbent for Sorption Enhanced Reforming Process	PNCC	Exhibit Hall A
Wednesday	6:00 PM	574f	Passive Heat Exchanger Temperature Control Using Variable Conductance Heat Pipes	PNCC	Exhibit Hall A
Thursday	8:30 AM	582e	Carbon Dioxide Reforming of Methane to Synthesis Gas Over Nickel Incorporated Ni-Mcm-41 Catalysts	PNCC	Room 102-A
Thursday	8:30 AM	600a	Hydrogen Adsorption In Thin Films of Prussian Blue Analogue	PNCC	Room 103-C
Thursday	8:30 AM	615d	Investigation of Microwave Interactions with Nickel Based Autothermal Reforming Catalysts	PNCC	Room 102-B
Thursday	8:30 AM	589f	PEM-Based Electrochemical Separation of Gases	PNCC	Room 303-B
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	627f	Pre-Combustion CO ₂ Capture at High Temperature with Alkaline Promoted Aluminas and Hydrotalcites: The Crucial Role of Alkaline Cations In CO ₂ Adsorption	Marriott	Salon J
Thursday	12:30 PM	668b	Rational Design of Hierarchically Structured Porous Catalysts and Its Application to Autothermal Reforming for Fuel Cells	Marriott	Room 309/310
Thursday	3:15 PM	699e	Asymmetric Membrane Formation by Hollow Fiber Spinning - Theory and Experiment	Loews	Congress B Room
Thursday	3:15 PM	691c	Autothermal Reformer Design for Fuel Cell Applications	PNCC	Room 102-A
Thursday	3:15 PM	686f	Calcium Looping Process for Hydrogen, Electricity and Liquid Fuel Production with In-Situ Carbon Dioxide and Sulfur Capture	Marriott	Salon K
Thursday	3:15 PM	691g	Design and Optimization of Micro Reactor-Heat Exchanger Cascade Configurations for Autothermal Conversion of Iso-Octane to Hydrogen	PNCC	Room 102-A
Thursday	3:15 PM	691d	Dodecane ATR Over Ni-Monolith Catalysts: Effects of Catalyst Calcination Temperature and Oxygen/ Carbon Ratio	PNCC	Room 102-A
Thursday	3:15 PM	675g	Metal-Organic Aerogels-a New Kind of Porous Material	Marriott	Salon J
Thursday	3:15 PM	699c	Pd-Ag-Ni Ternary Alloy Membrane on Nickel Supported Substrate for High Temperature Hydrogen Separation: Introduction of TiO ₂ as a Diffusion Barrier	Loews	Congress B Room
Thursday	3:15 PM	694e	Process Integration and Optimization of Hydrogen Production Strategies	Loews	Howe Room
Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Thursday	3:15 PM	691b	Studies on An Annulus-Type Micro-Reformer System Integrated with a Two-Stage Micro-Combustor	PNCC	Room 102-A
Thursday	3:15 PM	691a	Supported Silver Based Adsorbents for Deep Desulfurization of Hydrocarbon Fuels for Fuel Cell Applications	PNCC	Room 102-A
Thursday	3:15 PM	701b	The Effect of H ₂ S on the Long-Term Stability of Pd-Cu Membranes and the Characteristics of H ₂ S Poisoning of Electroless Deposited Pd	Loews	Congress A Room
Thursday	3:15 PM	694d	Thermodynamic Evaluation of Processes for Hydrogen Production from Coal – Theoretical and Experimental Studies	Loews	Howe Room
Friday	8:00 AM	732b	High Throughput Methodology for Study of Surface Segregation	Marriott	Room 309/310

FUEL CELLS

Day	Time	Paper #	Paper Title	Property	Room
Monday	8:30 AM	32e	Advanced Membrane Technologies for Shipboard and Apu Fuel Cell Systems	Loews	Congress A Room
Monday	8:30 AM	32a	Defect-Free Composite Pd Membranes with High Temperature Long-Term Stability	Loews	Congress A Room
Monday	8:30 AM	47b	Rapid Fabrication of Metal Organic Framework Thin Films Using Microwave-Induced Thermal Deposition	PNCC	Room 202-B
Monday	8:30 AM	45b	Tailoring the Pore Morphology of Pure and Mixed La- and Ce-Oxides	Marriott	Franklin 10
Monday	12:30 PM	75d	Autothermal Reforming of Dodecane Over Ru-Ni-Based Aerogel and Xerogel Catalysts	PNCC	Room 203-A
Monday	12:30 PM	111a	Membrane Module Design	Loews	Congress A Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	75c	Morphological Study of Deposited Carbon Derived from Dodecane Reforming Over Ni-Based Monolith Catalysts	PNCC	Room 203-A
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	75a	Rhodium Supported on Thermally Enhanced Zeolite as Catalysts	PNCC	Room 203-A
Monday	3:15 PM	169d	A Comparison of Mesopore Templating Methods for Ceria-Zirconia-Yttria Catalysts	PNCC	Room 202-B
Monday	3:15 PM	132b	Adsorption and Diffusion of Gases In Mof-5, Mof-177 and Zeolite 5A	Marriott	Salon I
Monday	3:15 PM	155c	Catalysis and Reaction Engineering: Sites, Pellets, and Reactors	Loews	Lescaze Room
Monday	3:15 PM	167f	Coagulation of Charged Nanoparticles: Refined Classical Approach and Its Limits	Marriott	Salon C
Monday	3:15 PM	132f	Metal Organic Framework Supported Molybdenum Carbide Sorbents for Sulfur Removal	Marriott	Salon I
Monday	3:15 PM	184h	Molecular Chemisorption of O ₂ on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Monday	6:00 PM	185d	Ceria-Based Oxides for Catalysis Applications Investigated by the DFT+U Approach	PNCC	Exhibit Hall A
Monday	6:00 PM	189z	Preparation and Characterization of Nanodispersed Ag-Based Sorbent for Removal of Sulfur from Logistic Fuels	PNCC	Exhibit Hall A
Tuesday	8:30 AM	192d	Advances In Computational Catalysis: Past, Present and Future	Loews	Commonwealth B
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	219d	Desulfurization of Liquid Fuels by Adsorption for Fuel Cell Applications	PNCC	Room 113-C
Tuesday	8:30 AM	219c	Miniature Reformer Design for Autothermal Reforming of Methanol to Generate Hydrogen for Portable Power Applications	PNCC	Room 113-C
Tuesday	8:30 AM	195c	Pervaporation Membrane Analysis for Logistics Fuel Separation for Navy Platforms	Loews	Congress B Room
Tuesday	8:30 AM	209e	Study of the Activity of Mo-Oxide Catalysts for the Reforming of Hydrocarbons	PNCC	Room 103-A
Tuesday	12:30 PM	325a	A Hundred Year Historical View of Energy, An Essential Pillar for the Progress of Humanity	Marriott	Salon E
Tuesday	12:30 PM	274e	Contaminant Tolerant Catalysts for High Temperature Membrane Wgs Reaction	PNCC	Room 103-A
Tuesday	12:30 PM	274c	Effect of Sulfur on Mo ₂ C-Supported Liquefied Petroleum Gas Steam Reforming Catalysts	PNCC	Room 103-A
Tuesday	12:30 PM	259c	Surface Science Studies of Metal Oxides	Loews	Commonwealth B
Tuesday	3:15 PM	336a	Characterization of Pd-Based Membrane Fabricated by Surfactant Induced Electroless Plating (SIEP): Effect of Grain Size In Hydrogen Permeability	Loews	Congress A Room
Wednesday	8:30 AM	403e	Support Effects on the Catalytic Properties of Pt-Au Bimetallic. A Multi-Scale Simulation Study	Marriott	Room 401/402
Wednesday	8:30 AM	452f	The Adsorption of Water on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Wednesday	8:30 AM	403f	Theoretical and Experimental Studies of Hydrogen Production from Ammonia Decomposition	Marriott	Room 401/402
Wednesday	12:30 PM	469a	First Principles Investigation of Water Dissociation on Cu, Au, and Pt-Group Metals	Marriott	Room 401/402
Wednesday	12:30 PM	471b	Identification and Control of a Tubular Solid Oxide Fuel Cell (SOFC)	PNCC	Room 203-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	12:30 PM	477d	Using Quantitative Modeling of Molecular Transport to Accelerate Development of Membranes for Gas Separations	Loews	Congress B Room
Wednesday	3:15 PM	526b	Enhancing the Capacity of Silver Based Adsorbents for Desulfurization of Liquid Hydrocarbon Fuels	Marriott	Salon J
Wednesday	6:00 PM	575ax	An Investigation of the Effect of Mass Transfer on the Product Selectivity In Fischer-Tropsch Synthesis	PNCC	Exhibit Hall A
Wednesday	6:00 PM	574f	Passive Heat Exchanger Temperature Control Using Variable Conductance Heat Pipes	PNCC	Exhibit Hall A
Thursday	8:30 AM	592g	Detailed Steady State Modeling of An Anode-Supported Solid Oxide Fuel Cell (SOFC)	PNCC	Room 201-B
Thursday	8:30 AM	615d	Investigation of Microwave Interactions with Nickel Based Autothermal Reforming Catalysts	PNCC	Room 102-B
Thursday	8:30 AM	589f	PEM-Based Electrochemical Separation of Gases	PNCC	Room 303-B
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	642a	Operating Mechanism and Activation Phenomena of Solid Oxide Fuel Cell Cathodes	PNCC	Room 303-B
Thursday	12:30 PM	668b	Rational Design of Hierarchically Structured Porous Catalysts and Its Application to Autothermal Reforming for Fuel Cells	Marriott	Room 309/310
Thursday	12:30 PM	647a	Sulfonated Polyimide-Silica Proton Exchange Nanocomposites	Loews	Congress A Room
Thursday	12:30 PM	646a	The Influence of Nickel Catalyst Geometry on the Dissociation Barriers of H ₂ and CH ₄ : Ni ₁₃ Vs. Ni(111)	PNCC	Room 106-B
Thursday	12:30 PM	648e	U.S. Navy Desulfurization Adsorbent Development	PNCC	Room 111-B
Thursday	3:15 PM	690f	A Novel Method for the Performance Analysis of a Molten Carbonate Fuel Cell	PNCC	Room 111-B
Thursday	3:15 PM	699e	Asymmetric Membrane Formation by Hollow Fiber Spinning - Theory and Experiment	Loews	Congress B Room
Thursday	3:15 PM	691c	Autothermal Reformer Design for Fuel Cell Applications	PNCC	Room 102-A
Thursday	3:15 PM	691g	Design and Optimization of Micro Reactor-Heat Exchanger Cascade Configurations for Autothermal Conversion of Iso-Octane to Hydrogen	PNCC	Room 102-A
Thursday	3:15 PM	690e	Development of a Tubular Proton Exchange Membrane Fuel Cell (PEMFC) –Experimental and Modeling Studies	PNCC	Room 111-B
Thursday	3:15 PM	690b	Direct Carbon Conversion in Carbon Dioxide as the Fuel for Solid-Oxide Fuel Cells	PNCC	Room 111-B
Thursday	3:15 PM	702f	Frontal Flow Effects In 2-D Simulations of Orientation In High Aspect Ratio Particles Composites Made by Injection Molding	PNCC	Room 202-B
Thursday	3:15 PM	675g	Metal-Organic Aerogels-a New Kind of Porous Material	Marriott	Salon J
Thursday	3:15 PM	699c	Pd-Ag-Ni Ternary Alloy Membrane on Nickel Supported Substrate for High Temperature Hydrogen Separation: Introduction of TiO ₂ as a Diffusion Barrier	Loews	Congress B Room
Thursday	3:15 PM	691a	Supported Silver Based Adsorbents for Deep Desulfurization of Hydrocarbon Fuels for Fuel Cell Applications	PNCC	Room 102-A
Thursday	3:15 PM	708f	The Electrochemical Impedance Study and Performance of Methanol Electrode Oxidation at Electrocatalyst Pt-Ru/c and Pt-Ru/cnt	Marriott	Room 309/310
Friday	8:00 AM	735c	Kinetic Monte Carlo Simulation and Frequency Response Analysis of the Solid-Oxide Fuel Cell Cathode	PNCC	Room 109-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Friday	8:00 AM	740a	Kinetic Phenomena In Low-Temperature CO Oxidation on Nanostructured Pt Catalysts	PNCC	Room 102-A
Friday	10:45 AM	760f	An STM Study of High-Coverage Structures of Atomic Oxygen on Pt(111)	Marriott	Room 309/310
Friday	10:45 AM	768c	Electrochemical Performance of Direct Carbon Fuel Cell Based on Molten Carbonate Eutectic Electrolytes	PNCC	Room 111-B

ENERGY EFFICIENCY

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5ba	The Development and Reactivity of Oxide Phases on Pd(111) Utilizing Gas Phase Oxygen Atom Beams In Ultra High Vacuum	PNCC	Exhibit Hall A
Monday	8:30 AM	32e	Advanced Membrane Technologies for Shipboard and Apu Fuel Cell Systems	Loews	Congress A Room
Monday	8:30 AM	32a	Defect-Free Composite Pd Membranes with High Temperature Long-Term Stability	Loews	Congress A Room
Monday	8:30 AM	25a	Evolution and Revolution: Process Innovations In Aromatics Technology	Loews	Commonwealth A1
Monday	8:30 AM	23f	Metal-Support Interactions In High-Temperature Stabilized Nanocomposites	PNCC	Room 202-A
Monday	8:30 AM	13d	Self-Condensation of Acetophenone to Dypnone: Synergism of Microwave and Solid Acid Catalysts	PNCC	Room 204-C
Monday	12:30 PM	83a	Diffusion and Reaction in Catalytic Monolith Washcoat - Modeling Approaches	PNCC	Room 103-A
Monday	12:30 PM	85a	Downstream Development of Drag Reduction by Pipe Wall Injection of Concentrated Polyox into Water at Reynolds Numbers from 55000 to 140000	PNCC	Room 109-B
Monday	12:30 PM	79f	Kinetic Modeling of Oxidation Methane Conversion in Regime of Filtration Combustion with Superadiabatic Heating	PNCC	Room 203-B
Monday	12:30 PM	83e	Low Temperature Scr Activity Over MnOx/TiO2 Catalysts Prepared by Sol-Gel Method; Effect of Mn Loadings	PNCC	Room 103-A
Monday	12:30 PM	111a	Membrane Module Design	Loews	Congress A Room
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	75a	Rhodium Supported on Thermally Enhanced Zeolite as Catalysts	PNCC	Room 203-A
Monday	12:30 PM	80f	Shear Rheology and Microstructure of a Concentrated Short Glass Fiber-Filled Polybutylene Terephthalate (PBT)	PNCC	Room 202-A
Monday	12:30 PM	79b	The Reaction of Vinyl Radical with Alkenes: Measured Rates and Predicted Pressure-Dependent Product Distributions	PNCC	Room 203-B
Monday	12:30 PM	106b	Wax Deposition Modeling In Oil/water Two-Phase Flows	Marriott	Salon D
Monday	3:15 PM	153b	Alkane Cracking and Dehydrogenation In Zeolites	PNCC	Room 102-A
Monday	3:15 PM	167f	Coagulation of Charged Nanoparticles: Refined Classical Approach and Its Limits	Marriott	Salon C
Monday	3:15 PM	171d	Hexane Isomerization In a Reverse-Flow Chromatographic Reactor	PNCC	Room 103-B
Monday	3:15 PM	143c	Large-Scale Nonlinear Programming: An Integrating Framework for Enterprise-Wide Dynamic Optimization	PNCC	Room 204-A
Monday	3:15 PM	169c	Surfactant-Templated Synthesis and Catalytic Properties of Ordered Nanoporous Titania Supports Loaded with Platinum Nanoparticles	PNCC	Room 202-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	6:00 PM	185d	Ceria-Based Oxides for Catalysis Applications Investigated by the DFT+U Approach	PNCC	Exhibit Hall A
Tuesday	8:30 AM	252h	A Global Optimization-Quantum Chemistry Approach for a Predictive Soft Equation for Mixtures	PNCC	Room 103-C
Tuesday	8:30 AM	240a	A Metric for Monitoring Mpc Optimization Strategy	PNCC	Room 202-A
Tuesday	8:30 AM	193d	Advances in Catalysis. A Historical Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	215e	Life Cycle Assessment Coupled with Multi-Objective Optimization for Environmentally Conscious Planning of Energy Production Systems	PNCC	Room 203-A
Tuesday	8:30 AM	244d	Magnetic Imaging of Pyrolysis Feedstocks to Model Olefin Product Yields from Naphthas	PNCC	Room 102-B
Tuesday	8:30 AM	213d	Mass Transfer Performance of Packed Beds Containing a Modular Catalytic Structured Packing: Model Vs. Experiment	Marriott	Franklin 4
Tuesday	8:30 AM	195f	Membrane Based Purification Process for Lactic Acid Production	Loews	Congress B Room
Tuesday	8:30 AM	199b	Nanoparticle Precursors and Phase Selectivity In Hydrothermal Synthesis of Zeolite Beta	PNCC	Room 201-C
Tuesday	8:30 AM	195c	Pervaporation Membrane Analysis for Logistics Fuel Separation for Navy Platforms	Loews	Congress B Room
Tuesday	8:30 AM	199f	Preparation of Metal Oxide/Zeolite Core-Shell Nanostructures	PNCC	Room 201-C
Tuesday	8:30 AM	249a	Preventing Plant Problems Before They Occur	PNCC	Room 201-A
Tuesday	8:30 AM	249b	The Evolution of the Smart Plant In the Industrial Gas Business	PNCC	Room 201-A
Tuesday	12:30 PM	325a	A Hundred Year Historical View of Energy, An Essential Pillar for the Progress of Humanity	Marriott	Salon E
Tuesday	12:30 PM	269d	A Hybrid Interval Constraint Propagation and Mathematical Programming Method for Energy Systems Synthesis	PNCC	Room 203-B
Tuesday	12:30 PM	289c	Ab Initio Studies of Ceria-Based Oxides for Direct Hydrocarbon Oxidation	PNCC	Room 102-A
Tuesday	12:30 PM	274b	Effect of Reaction Temperature on the Performance of Thermal Swing Sorption Enhanced Reaction Process for Simultaneous Production of Fuel Cell Grade H ₂ and Compressed CO ₂ from Synthesis Gas	PNCC	Room 103-A
Tuesday	12:30 PM	282b	Fifty Years of Fri Contributions to Separation Science	Marriott	Franklin 4
Tuesday	12:30 PM	252d	Fluid-Phase Properties Using Direct Calculation of Cluster Integrals	PNCC	Room 103-C
Tuesday	12:30 PM	262a	Hydrotreating Reaction Performance In Small Catalyzed Channels	Loews	Commonwealth D
Tuesday	12:30 PM	311g	Imbibition Transition and the "Gate Effect" In Adsorption	Marriott	Salon I
Tuesday	12:30 PM	259b	Toward Ultimate Selectivity: Site-Directed Chemistry and Catalysis at Pt-Sn Alloy Surfaces	Loews	Commonwealth B
Tuesday	3:15 PM	363b	Dependence of Sensing Properties upon Metal Oxide Nanostructure	Marriott	Franklin 10
Tuesday	3:15 PM	330f	Economic and Environmental Analysis of Hydrogen Production Strategies	PNCC	Room 113-B
Tuesday	3:15 PM	341j	Retrofit of Distillation Columns In a Methanol Plant	Marriott	Franklin 4
Tuesday	3:15 PM	327c	Selectivity In Surface Chemistry	Loews	Commonwealth B
Tuesday	3:15 PM	327b	Turning Surface Science into New Catalysis	Loews	Commonwealth B
Wednesday	12:30 PM	474a	Design of Reactive Distillation Processes Using Simulated Annealing	Marriott	Franklin 4
Wednesday	12:30 PM	515d	Phase Behavior and Applications of Ionic Liquid/compressed Refrigerant Gases (R-134a & CO ₂)	PNCC	Room 105-B
Wednesday	12:30 PM	484d	Solids Drying Process Simulation by Solidsim — a New Tool for Flow Sheeting of Solids Processes	Loews	Commonwealth C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	12:30 PM	515c	Structure-Property Relationships for the Optimization of Reversible Ionic Liquid Solvents	PNCC	Room 105-B
Wednesday	12:30 PM	488d	The Effect of Sweep Uniformity on Gas Dehydration Modules	Loews	Congress A Room
Wednesday	12:30 PM	483e	Thermodynamics: A Fifty Year Review	PNCC	Room 103-A
Wednesday	12:30 PM	486a	Toward the Reproducible Intrinsic Kinetic Measurement in Multi-Phase Microreactors	PNCC	Room 303-B
Wednesday	12:30 PM	512a	Uncertainty Analysis of An Igcc System with Single-Stage Entrained-Flow Gasifier	Loews	Lescaze Room
Wednesday	3:15 PM	543a	Designation of a Self-Catalytic Mixed-Conducting Membrane Reactor for Partial Oxidation of Methane to Syngas	Loews	Congress A Room
Wednesday	6:00 PM	577s	Energy Optimization through Non-Linear Modeling and Control of Fuel Gas Process at Hovensa	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575az	Experimental and Modeling Studies of NOx Storage and Reduction for a Diesel Exhaust In the Presence of H2O and CO2	PNCC	Exhibit Hall A
Wednesday	6:00 PM	574f	Passive Heat Exchanger Temperature Control Using Variable Conductance Heat Pipes	PNCC	Exhibit Hall A
Thursday	8:30 AM	624b	Energy Cost Optimization In Membrane Desalination and the Thermodynamic Restriction	PNCC	Room 204-B
Thursday	8:30 AM	615d	Investigation of Microwave Interactions with Nickel Based Autothermal Reforming Catalysts	PNCC	Room 102-B
Thursday	8:30 AM	592b	Modeling of Fouling in Crude Oil Pre-Heat Trains to Reduce Energy Losses and Carbon Emissions	PNCC	Room 201-B
Thursday	8:30 AM	589f	PEM-Based Electrochemical Separation of Gases	PNCC	Room 303-B
Thursday	8:30 AM	586g	Towards the Sustainable Use of Seawater for Process Cooling	Marriott	Room 502
Thursday	12:30 PM	627a	Adsorption and Diffusion of Gases In ETS-10 and Mof Adsorbents	Marriott	Salon J
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	672b	Minimum Energy Distillation Column Sequences	PNCC	Room 201-B
Thursday	12:30 PM	633d	Structure and Colloidal Stability of Nanosized Zeolite Precursors In the Hydrothermal Synthesis of Zeolite Beta	PNCC	Room 102-A
Thursday	12:30 PM	641e	Successful Industrial Application of Robust Inferential Sensors for NOx Emissions Monitoring	PNCC	Room 204-C
Thursday	12:30 PM	626e	Systematic Methods for Process Synthesis and Design	PNCC	Room 109-B
Thursday	12:30 PM	648e	U.S. Navy Desulfurization Adsorbent Development	PNCC	Room 111-B
Thursday	3:15 PM	699e	Asymmetric Membrane Formation by Hollow Fiber Spinning - Theory and Experiment	Loews	Congress B Room
Thursday	3:15 PM	686f	Calcium Looping Process for Hydrogen, Electricity and Liquid Fuel Production with In-Situ Carbon Dioxide and Sulfur Capture	Marriott	Salon K
Thursday	3:15 PM	686c	Effect of Sulfur Contaminants on the Performance of Oxygen Carriers In Chemical Looping Combustion	Marriott	Salon K
Thursday	3:15 PM	675g	Metal-Organic Aerogels-a New Kind of Porous Material	Marriott	Salon J
Thursday	3:15 PM	694e	Process Integration and Optimization of Hydrogen Production Strategies	Loews	Howe Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	692a	Structure-Activity Relations for the Reactions of Alkyl-Sulfur Compounds with Model Metal-Oxide Surfaces	PNCC	Room 102-B
Thursday	3:15 PM	695g	Synthesis, Characterization and Separation Property of Zeolite Membrane for Steam Separation	Loews	Washington B Room
Thursday	3:15 PM	694d	Thermodynamic Evaluation of Processes for Hydrogen Production from Coal – Theoretical and Experimental Studies	Loews	Howe Room
Thursday	6:00 PM	719s	Light Olefin/paraffin Separation Using Cu Based Adsorbent	PNCC	Exhibit Hall A
Thursday	6:00 PM	722al	One-Part Geopolymer Mixes from Geothermal Silica and Sodium Aluminate	PNCC	Exhibit Hall A
Thursday	6:00 PM	721a	Separation of the Benzene/cyclohexane Mixture by a Distillative Crystallization Technology	PNCC	Exhibit Hall A
Thursday	6:00 PM	721j	Structured Adsorbent Bed for Rapid Adsorption and Regeneration Process	PNCC	Exhibit Hall A
Friday	8:00 AM	747a	Carbon Neutrality In Chemical Process Design: The Pinch Design Concept and Options Trading Strategies	PNCC	Room 106-A/B
Friday	8:00 AM	732f	DFT Studies of the Reactivity of Oxide Phases on Pd(111)	Marriott	Room 309/310
Friday	10:45 AM	772g	Compressible Lattice Model for CO ₂ + Cosolvent + Polymer Systems	PNCC	Room 103-B
Friday	10:45 AM	761d	Dynamics and Control of Air Separation Unit-Gas Turbine-Gasifier Integrated Power Cycle of Igcc Plants	PNCC	Room 202-B
Friday	10:45 AM	760g	First-Principles Studies of the Oxidation of Transition Metal Surfaces	Marriott	Room 309/310

RENEWABLE

WIND

Day	Time	Paper #	Paper Title	Property	Room
Monday	12:30 PM	123d	The Effects of the Renewable Portfolio Standards In the State of Alabama	Marriott	Salon C
Monday	3:15 PM	173b	Modular Teaching and Open Ended Design Projects	Marriott	Franklin 5
Monday	3:15 PM	153a	Towards Computational Screening for New Catalysts	PNCC	Room 102-A
Tuesday	3:15 PM	380d	Establishing Sustainable Society through Local Processing within Biomass Communities and Material Recycle with Carbon Dioxide and Water	Loews	The Terrace Room
Tuesday	3:15 PM	330c	Windfuels – Competitive Transportation Fuels from Wind Energy and Waste CO ₂	PNCC	Room 113-B
Wednesday	8:30 AM	449c	Principles of Sustainable Energy Course at Ohio State University	Loews	Lescaze Room
Wednesday	8:30 AM	449g	Sustainability Engineering Workshop at Asee 2007 Summer School	Loews	Lescaze Room
Wednesday	8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday	3:15 PM	563b	Synergistic Use of Solar Hydrogen with Biomass to Produce Biofuels	Loews	Lescaze Room
Wednesday	6:00 PM	578ad	Minlp Optimization of Cooling Towers	PNCC	Exhibit Hall A
Friday	10:30 AM	750c	Mathematical Models In Input-Output Analysis of Economic and Ecological Systems	PNCC	Room 106-A/B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



SOLAR					
Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5q	Electrochemically Induced Charge Transfer to Wide Band Gap Semiconductors and Its Implication to Nanowire Based Solar Cells	PNCC	Exhibit Hall A
Sunday	1:00 PM	5e	Polymer Thin Film Nanoassemblies for Electrochemical Energy Conversion Devices	PNCC	Exhibit Hall A
Sunday	1:00 PM	5cv	Preparation of Heterogeneous Nanostructures for Catalytic and Magnetic Applications	PNCC	Exhibit Hall A
Monday	8:30 AM	45c	-Fe ₂ O ₃ Nanowire Array Based Electrodes for Self-Driven Photoelectrochemical Cells	Marriott	Franklin 10
Monday	8:30 AM	45e	Band Gap Modification of Oxide Nanowires for Solar Hydrogen Production	Marriott	Franklin 10
Monday	8:30 AM	45d	TiO ₂ Nanotubes Supported Gold Photoanodes for Photoelectrochemical Hydrogen Production	Marriott	Franklin 10
Monday	12:30 PM	85g	Comparative Study of Freezing Characteristics In Cylinders	PNCC	Room 109-B
Monday	12:30 PM	80d	Layer-by-Layer (LBL) Assembled Highly Conductive, Transparent and Robust Thin Carbon Nanotube Films for Optoelectronics	PNCC	Room 202-A
Monday	12:30 PM	90j	Robust Manufacturing of Novel Plasmonic Nanomaterials Via Liquid Phase Self Organization of Ultrathin Metal Films: Theory and Experiments	PNCC	Room 104-B
Monday	12:30 PM	123d	The Effects of the Renewable Portfolio Standards In the State of Alabama	Marriott	Salon C
Monday	3:15 PM	162d	Large-Scale Fabrication of Sub-100 Nm Periodic Nanostructures by Spin-Coating	Marriott	Franklin 12
Monday	3:15 PM	153a	Towards Computational Screening for New Catalysts	PNCC	Room 102-A
Monday	6:00 PM	188o	Complexity In Nanocrystal Self-Assembly: Size Mixing, Rods, Disks, Triangles, and Multiple Length Scales	PNCC	Exhibit Hall A
Monday	6:00 PM	185h	First-Principles Theoretical Analysis of Carbon Allotropes and Nanostructures Formed through Exposure of Multi-Walled Carbon Nanotubes to Hydrogen Plasmas	PNCC	Exhibit Hall A
Monday	6:00 PM	189aa	Synthesis of Nanoscale Cobalt-Iron Spinel Oxides Via Atomic Layer Deposition and Their Applications for Solar Thermochemical Water Splitting	PNCC	Exhibit Hall A
Tuesday	8:30 AM	201d	Hydrogen Production by Sulfur-Iodine Thermochemical Cycle: Experimental Tests on Hydriodic Section Concerning Iodine Purification System	Loews	Howe Room
Tuesday	12:30 PM	310d	3-Dimensional Monte Carlo Profile Simulation and Experimental Measurements of Surface Roughness Under Plasma Etching	Marriott	Room 401/402
Tuesday	12:30 PM	279b	Direct Visualization of Rapid Convective Deposition of Microsphere Monolayers	PNCC	Room 204-A
Tuesday	12:30 PM	269b	Simulation of the Silicon Ingot Slicing Process for Solar Cell Manufacturing	PNCC	Room 203-B
Tuesday	12:30 PM	258d	Ultra-High Temperature Transport Tube Reactor Processing - from Electrical to Solar Heating	Marriott	Franklin 8
Tuesday	3:15 PM	370a	An Analysis of the Deposition Mechanisms Involved during Self-Limiting Growth of Metal Oxides by Pulsed PECVD	PNCC	Room 202-B
Tuesday	3:15 PM	380d	Establishing Sustainable Society through Local Processing within Biomass Communities and Material Recycle with Carbon Dioxide and Water	Loews	The Terrace Room
Tuesday	3:15 PM	356c	Evaluation of Pathways to the Synthesis of Cu(In,Ga)Se ₂ Solar Cell Absorbers	Loews	Commonwealth C
Tuesday	3:15 PM	328b	Low Temperature Production of SO ₂ from H ₂ SO ₄ In the Si Thermochemical Cycle by Using Iron(III) Sulfate Intermediate	Loews	Howe Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday 8:30 AM	428e	Characterization and Processing/property Relationships of Semiconducting Polythiophene Nanotubes by Template Wetting Nanofabrication	Marriott	Franklin 3
Wednesday 8:30 AM	420a	Design and Assembly of Anisotropic Particles: The Shapes of Things to Come (With a Little Help from Computer Simulation)	PNCC	Room 201-A
Wednesday 8:30 AM	417c	Electrohydrodynamic Tip-Streaming and Emission of Charged Drops from Liquid Cones	PNCC	Room 104-A
Wednesday 8:30 AM	391c	High Temperature Rapid Dissociation of Mn ₂ O ₃ In An Aerosol Flow Reactor	Loews	Howe Room
Wednesday 8:30 AM	391e	Kinetics of the Thermochemical Ferrite Water Splitting Cycle Using Nano-Thick Cobalt-Iron Spinel Oxide Films Synthesized Via Atomic Layer Deposition	Loews	Howe Room
Wednesday 8:30 AM	438e	Photocatalytic Concrete Slab for Passive NO _x Pollution Control	Loews	Washington A Room
Wednesday 8:30 AM	449c	Principles of Sustainable Energy Course at Ohio State University	Loews	Lescaze Room
Wednesday 8:30 AM	391a	Solar Cadmium Hydrogen Cycle Update	Loews	Howe Room
Wednesday 8:30 AM	438d	Solar-Thermal Processing for Sustainable Production of Chemicals and Fuels	Loews	Washington A Room
Wednesday 8:30 AM	449g	Sustainability Engineering Workshop at Asee 2007 Summer School	Loews	Lescaze Room
Wednesday 8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday 8:30 AM	420e	The Road to Low-Cost and High-Efficiency Solar Cells Via Self-Assembled Nanomaterials	PNCC	Room 201-A
Wednesday 12:30 PM	516c	Chemical Engineering and the Development of the the Doctoral Portfolio Program at the University of Texas at Austin	Marriott	Franklin 1
Wednesday 12:30 PM	455b	Conceptual Design and Cost Estimate for a Solar-Powered Hybrid Sulfur Hydrogen Production Process	Loews	Howe Room
Wednesday 12:30 PM	512d	Photosynthetic Biohydrogen: A Case Study Integrating Sustainability into the Student Design Experience	Loews	Lescaze Room
Wednesday 12:30 PM	510a	Photosystem I Films at Nanoporous Gold Leaf Electrodes	Marriott	Room 414/415
Wednesday 12:30 PM	496c	Synthesis and Characterization of Zinc Oxide Nanoparticles for Dye-Sensitized Solar Cells	Loews	Commonwealth A2
Wednesday 12:30 PM	512b	Thermotolerant Photodependent Hydrogen Production by Platinized Photosystem I Reaction Centers and Recombinant Cytochrome c553 from Thermosynechococcus Elongatus	Loews	Lescaze Room
Wednesday 3:15 PM	522c	A Study of the Effect of Feeding Device Choice on Conversion In An Aerosol Flow Reactor	Loews	Congress B Room
Wednesday 3:15 PM	546d	Efficient and Robust Multi-Scale Models of Conjugate Heat Transfer and Melt Crystal Growth	PNCC	Room 204-C
Wednesday 3:15 PM	522b	Multi-Scale Modeling and Control of Particulate Cvd for Production of Solar Grade Silicon In Fluidized Beds	Loews	Congress B Room
Wednesday 3:15 PM	563b	Synergistic Use of Solar Hydrogen with Biomass to Produce Biofuels	Loews	Lescaze Room
Wednesday 6:00 PM	575v	Analysis of the Sol-Gel Synthesis of Tungsten-Based Nanomaterials In a Multiphase Semi-Batch Reactor	PNCC	Exhibit Hall A
Wednesday 6:00 PM	578aa	Numerical Modeling of Horizontal Wafering of Silicon Melts on a Molten Substrate	PNCC	Exhibit Hall A
Wednesday 6:00 PM	575b	Supported Catalysts in Heterogeneous Gas Phase Hydrogen Iodide Decomposition Reaction: A Screening Study	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	8:30 AM	588h	A Resource Sharing Approach to Nanotechnology Education: The PA Nanotechnology Partnership	PNCC	Room 104-B
Thursday	8:30 AM	608a	Germanium Nanocrystals : Colloidal Synthesis and Optical Characterization	Loews	Lescaze Room
Thursday	8:30 AM	599b	Materials Characterization for High Temperature Solar Hydrogen Production	Loews	Howe Room
Thursday	8:30 AM	608c	Molecular Design for Organic Solar Cells	Loews	Lescaze Room
Thursday	8:30 AM	624e	Natural Vacuum Solar Flash Desalination	PNCC	Room 204-B
Thursday	8:30 AM	608b	Self-Assembly of Polythiophene Block Copolymers	Loews	Lescaze Room
Thursday	8:30 AM	588e	Teaching Nanoscale Science and Engineering to Chemical Engineers at Georgia Tech	PNCC	Room 104-B
Thursday	8:30 AM	588a	The Nanolab: An Interdisciplinary Undergraduate Science and Engineering Laboratory at the University of Texas at Austin	PNCC	Room 104-B
Thursday	12:30 PM	657e	Effect of Surface Structure on Interfacial Charge Transfer In Photoelectrochemical Cells	Loews	Commonwealth D
Thursday	12:30 PM	657b	Growth of ZnO Nanowires for Dye-Sensitized Solar Cells	Loews	Commonwealth D
Thursday	12:30 PM	657c	High Yield Solution Synthesis of ZnO Nanowire Arrays Using a Novel Reactor Design	Loews	Commonwealth D
Thursday	12:30 PM	635c	Large Scale Hydrogen Production Using Solar Energy — Status, Challenges, and Plans	Loews	Howe Room
Thursday	12:30 PM	657d	Oriented Single Crystalline Titanium Dioxide Nanowires for Dye-Sensitized Solar Cells	Loews	Commonwealth D
Thursday	12:30 PM	660e	Structure-Photocatalytic Relationships of Well-Defined TiO2 Nanodomains	PNCC	Room 102-B
Thursday	3:15 PM	708d	A Comparative Study of Tungsten Monocarbide and Platinum as Counter Electrode Materials In Photoelectrochemical Solar Cells	Marriott	Room 309/310
Thursday	3:15 PM	704c	Band-Edge Engineered Hybrid SnO2 Nanowires Electrodes for Dye Sensitized Solar Cells	PNCC	Room 204-B
Thursday	3:15 PM	704f	Biomimetic Solar Energy Conversion by Photosystem I Films	PNCC	Room 204-B
Thursday	3:15 PM	705g	Molecular Assemblies of Nanoparticles: Surprising Analogy with Proteins and New Optical Properties	PNCC	Room 104-B
Thursday	3:15 PM	704a	Nanoscale Heterojunction Engineering to Grow High-Quality Ge on Si for Multijunction Solar Cells	PNCC	Room 204-B
Thursday	3:15 PM	704b	Plasmonics-Based Design of Nanostructured Materials for Solar Energy Harvesting	PNCC	Room 204-B
Thursday	3:15 PM	704e	Self-Assembled Biomimetic Antireflection Coatings	PNCC	Room 204-B
Thursday	6:00 PM	722aw	Inverse Opal Topology of TiO2 Electrodes for Photoelectrochemical Cells	PNCC	Exhibit Hall A
Friday	8:00 AM	740c	Combinatorial Screening of Carbon Supported Pt Based Binary and Ternary Systems as Electrocatalysts for Oxygen Evolution	PNCC	Room 102-A
Friday	8:00 AM	739d	Electrochemical Impedance Spectroscopy of ZnO Nanowire and Nanoparticle Dye Sensitized Solar Cells	PNCC	Room 108-B
Friday	8:00 AM	739c	New Approaches to Cost Effective Oxide-Based Photovoltaics	PNCC	Room 108-B
Friday	8:00 AM	747d	Simulation of a Thermodynamic Cycle with Organic Absorbents and CO2	PNCC	Room 106-A/B
Friday	10:30 AM	750c	Mathematical Models In Input-Output Analysis of Economic and Ecological Systems	PNCC	Room 106-A/B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



BIOMASS					
Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5aq	Biological Production of Renewable Energies from Waste Materials	PNCC	Exhibit Hall A
Sunday	1:00 PM	5n	Cellulosic Nanowhiskers with Surface Functionality Derived Using Renewable Reagents and Their Nanocomposites	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ct	Generation of Renewable Fuels and Chemicals from Lipids Via Supercritical Fluid Processing	PNCC	Exhibit Hall A
Sunday	1:00 PM	5cn	Green Nanotechnology, Engineering and Synthesis for Energy, Biomedical and Environmental Applications	PNCC	Exhibit Hall A
Sunday	1:00 PM	5di	High Density, Vertically-Aligned Carbon Nanotube Membranes with High Fluxes	PNCC	Exhibit Hall A
Sunday	1:00 PM	5co	Incorporation of Non-Linear Methods into Genome-Scale Models: Expanding the Model for the Butanol Producer Clostridium Acetobutylicum	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ae	Supercritical and Expanded Solvent Systems for the Sustainable Utilization of Biomass Feedstocks	PNCC	Exhibit Hall A
Sunday	1:00 PM	5cs	Surface Functionalization of Renewable Carbon Nanospheres for Applications In Polymer Nanocomposites	PNCC	Exhibit Hall A
Sunday	1:00 PM	5cq	Sustainable Energy and Environmental Resource Management: A Systems Theory Approach	PNCC	Exhibit Hall A
Monday	8:30 AM	14a	Biobutanol Production Via Fermentation of Hot-Water Wood Extract Sugars	PNCC	Room 106-B
Monday	8:30 AM	14b	Engineering Escherichia Coli for Improved Ethanol and Butanol Tolerance for Biofuel Production	PNCC	Room 106-B
Monday	8:30 AM	51c	Finding Needles In Haystacks: Functional Genomics and Extremophile Biotechnology	Loews	Washington C Room
Monday	8:30 AM	14e	High Throughput Approach for Identifying Pentose Fermenting Microbes In the Environment	PNCC	Room 106-B
Monday	8:30 AM	14c	Integrating Systems and Synthetic Biology to Optimize Biofuel Pathways In Microorganisms	PNCC	Room 106-B
Monday	8:30 AM	18b	Model Based Monitoring and Control of a Cstr-Type Anaerobic Digester	PNCC	Room 303-A
Monday	8:30 AM	29b	Nanostructured Catalysts for CO2 Hydrogenation to Higher Hydrocarbons	PNCC	Room 103-A
Monday	8:30 AM	31d	Separation of Chemicals Produced by Acidogenic Fermentation	Marriott	Franklin 4
Monday	12:30 PM	96e	Advances toward Obtaining Kinetics from Reactive Molecular Dynamics	PNCC	Room 102-A
Monday	12:30 PM	69e	Biological Production of Hydroxyacids from Renewable Sources	PNCC	Room 106-B
Monday	12:30 PM	64g	Changes of Cellulose Reactivity with Purified Enzyme Components during Hydrolysis	PNCC	Room 107-A
Monday	12:30 PM	69a	Complete Microbiological Fuel Cell. A Photosynthetic Cathode Coupled to a Fermentative Anode	PNCC	Room 106-B
Monday	12:30 PM	115a	Dependence of the Hydrolytic Degradation of Poly(ester-anhydride) Copolymers on pH, Temperature, and Time	PNCC	Exhibit Hall A
Monday	12:30 PM	86g	Experimental Investigation of Biofuel Production from Malaysia Agricultural Waste In a Fluidized Bed Gasifier	Marriott	Salon B
Monday	12:30 PM	87c	Jetting Observations In a Cold-Flow Fluidized Bed	Loews	Congress B Room
Monday	12:30 PM	107b	Land Use Change Effects on Life Cycle Greenhouse Gas Emissions of Bio-Based Fuels and Pharmaceutical Products	PNCC	Room 204-C
Monday	12:30 PM	104b	Liquid-Liquid Extraction of Alcohols from Water Using Ionic Liquids	Marriott	Franklin 4
Monday	12:30 PM	118a	Preliminary Design of Bioethanol Process Plants	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	69b	Properties of Algal-Based Biodiesel	PNCC	Room 106-B
Monday	12:30 PM	109f	Separations Challenges in Aqueous Separations	Loews	Commonwealth C
Monday	12:30 PM	123d	The Effects of the Renewable Portfolio Standards In the State of Alabama	Marriott	Salon C
Monday	12:30 PM	69c	The Influence of Redox Potential and Sulfide Concentration In the Fermentation of Syngas to Ethanol	PNCC	Room 106-B
Monday	3:15 PM	138f	Cellulose Liquefaction and Hydrogen Production In Supercritical Water	PNCC	Room 203-A
Monday	3:15 PM	146c	Fatty Acid and Lipid Accumulation In Municipal Wastewater Microorganisms Growing on a Nitrogen-Limited Synthetic Wastewater Medium	PNCC	Room 106-B
Monday	3:15 PM	146a	From Raw Cassava Pulp to L-Lactic Acid Via Fermentation by <i>Rhizopus Oryzae</i>	PNCC	Room 106-B
Monday	3:15 PM	171c	High Pressure Catalytic Hydrogenation of Acetone In a PDMS Based Recirculating Microreactor System	PNCC	Room 103-B
Monday	3:15 PM	179a	Membrane Extraction for Acetic Acid and Lignin Removal from Biomass Hydrolysates	Loews	Congress A Room
Monday	3:15 PM	146e	Production of Butanol from Biodiesel Derived Crude Glycerol Using Pure Cultures of <i>C. Pasteurianum</i> (ATCC 6013)	PNCC	Room 106-B
Monday	3:15 PM	146b	Production of Platform Chemicals from Renewable Sugars: Low-Cost Succinic Acid Fermentation Using Engineered <i>Escherichia Coli</i>	PNCC	Room 106-B
Monday	3:15 PM	146f	Sludges-to-Ethanol as a Supplementary Unit In Kraft Paper Mill	PNCC	Room 106-B
Monday	3:15 PM	153c	Strategies for Changing the Energy Content and Achieving C-C Coupling In Biomass-Derived Oxygenated Hydrocarbons	PNCC	Room 102-A
Monday	3:15 PM	175a	Synthetic Membrane Filtration: Breakthroughs and Needs	Loews	Commonwealth B
Monday	3:15 PM	169b	Tailoring CO Bond Energies Via Compositional Tailoring in Bimetallic Nanocatalysts	PNCC	Room 202-B
Tuesday	8:30 AM	192a	A Century of Chemical and Physical Adsorption to Characterize Catalysts	Loews	Commonwealth B
Tuesday	8:30 AM	246c	Adsorption In Zeolites for Detoxification of Lignocellulosic Biomass	Loews	Washington B Room
Tuesday	8:30 AM	193a	An International Assessment of Research in Catalysis by Nanostructured Materials	PNCC	Room 103-B
Tuesday	8:30 AM	236g	Bimodal Suspension Flow through An Abrupt Contraction-Expansion	PNCC	Room 104-B
Tuesday	8:30 AM	226b	Cfd Modeling of Cold-Flow Fluidized Beds and Validation with X-Ray Computed Tomography	Marriott	Franklin 2
Tuesday	8:30 AM	197b	Computational Analysis of Yeast Xylose Metabolism	PNCC	Room 307-B
Tuesday	8:30 AM	202e	Conversion of Microalgae to Biodiesel at Supercritical Conditions	PNCC	Room 113-B
Tuesday	8:30 AM	197d	Elucidating Mechanisms of Acetate Tolerance In <i>E. Coli</i> Using Scales	PNCC	Room 307-B
Tuesday	8:30 AM	202a	Growing Lipid-Rich Microalga In Wastewater for Biodiesel Production	PNCC	Room 113-B
Tuesday	8:30 AM	226c	Industrial Application of Cpdf to Biomass Gasification	Marriott	Franklin 2
Tuesday	8:30 AM	246a	Membrane Separation Techniques in the Continuous Fermentation and Separation of Butanol: Possible Applications of a Two-Step Process in a Biorefinery	Loews	Washington B Room
Tuesday	8:30 AM	205b	Modification and Functionalization of Soybean Oil Resins for Dielectric Applications	PNCC	Room 204-B
Tuesday	8:30 AM	251e	Multiplex Recombineering: Progress toward the Multigenic Insertion of Regulatory Elements and Potential Applications In Metabolic Engineering	Loews	Washington C Room
Tuesday	8:30 AM	202g	Oil Accumulation by Sewage-Grown Oleaginous Microorganisms	PNCC	Room 113-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	8:30 AM	200b	Process Intensification In Continuous Base-Catalyzed Biodiesel Production	Loews	Commonwealth D
Tuesday	8:30 AM	251g	Secreting Cellulases from Salmonella	Loews	Washington C Room
Tuesday	8:30 AM	202c	Simulation of Algal Growth In a Photobioreactor	PNCC	Room 113-B
Tuesday	8:30 AM	193c	The Complex Science of Catalysis and Catalytic Materials. A Historic and Forward Looking Perspective	PNCC	Room 103-B
Tuesday	8:30 AM	197c	The Dynamic Biomass Constituting Equation for the Genome-Scale Model of the Biofuels Producer Clostridium Acetobutylicum	PNCC	Room 307-B
Tuesday	8:30 AM	237f	The Role of Experiments In the Development of Chemical Technology	Loews	Commonwealth C
Tuesday	8:30 AM	209d	The Roles of the Transition Metal Oxides Nanoparticles and Their Interaction with Noble Metals In Processing Biomass Renewable Energy	PNCC	Room 103-A
Tuesday	8:30 AM	199c	The Spectroscopic Signature Nitrogen-Substituted Zeolites	PNCC	Room 201-C
Tuesday	8:30 AM	205e	Thermal and Mechanical Properties of Polylactide-Nanoporous Zeolite Composites	PNCC	Room 204-B
Tuesday	12:30 PM	295a	Catalytic Autothermal Reforming of Renewable Fuels at Millisecond Times	PNCC	Room 111-B
Tuesday	12:30 PM	291c	DuPont: Building on the Past towards a Sustainable Future	Loews	Washington C Room
Tuesday	12:30 PM	258c	From Ethanol and Butanol Fermentations to Cell- and Tissue-Culture ... and Back to Biofuels, 100 Years of Bioreactor Design, Operation and Challenges	Marriott	Franklin 8
Tuesday	12:30 PM	267a	Impacts of New Technologies and Policies on Biofuels Production and Trade	PNCC	Room 113-B
Tuesday	12:30 PM	265c	Improvement of Pyrolysis Model In Black Liquor Gasification	Marriott	Salon D
Tuesday	12:30 PM	267d	Novel Algal Photobioreactor Design and Operation for the Biofuels Industry	PNCC	Room 113-B
Tuesday	12:30 PM	267f	Oleaginous Microorganisms Utilizing Glycerol as Sole Carbon Source for the Production of Lipids for Biofuels	PNCC	Room 113-B
Tuesday	12:30 PM	265e	Pilot-Scale Comparison of Steam Gasification with Herbaceous and Woody Feedstocks	Marriott	Salon D
Tuesday	12:30 PM	267c	Results and Considerations of a Statistically Designed Experiment for the Production of Bio-Oil from a Lab-Scale Free Fall Pyrolyzer	PNCC	Room 113-B
Tuesday	12:30 PM	291f	The Challenges of Diminishing Natural Capital in the Transition to a Bio-Based Industry	Loews	Washington C Room
Tuesday	3:15 PM	330b	Accelerating Sample Preparation in the Biofuel R&D by Automated High Output Technologies	PNCC	Room 113-B
Tuesday	3:15 PM	341b	Control of the Heterogeneous Azeotropic N-Butanol/water Distillation System	Marriott	Franklin 4
Tuesday	3:15 PM	335d	Conversion of Oxygenated Mixtures Derived from Syngas into Hydrocarbons	PNCC	Room 103-A
Tuesday	3:15 PM	335b	Desulfurization / Tar Removal for Gasifier and Biogasifier Effluents with Mixed Rare Earth Oxides	PNCC	Room 103-A
Tuesday	3:15 PM	368b	Development of Solid Waste Landfills	Loews	Lescaze Room
Tuesday	3:15 PM	380d	Establishing Sustainable Society through Local Processing within Biomass Communities and Material Recycle with Carbon Dioxide and Water	Loews	The Terrace Room
Tuesday	3:15 PM	341a	Reducing the Energy Demand of Bio-Ethanol through Salt-Extractive Distillation and Electrodialysis	Marriott	Franklin 4
Tuesday	3:15 PM	380c	Sustainable Production and Consumption: The Role of Industry and the Consumer in Reducing Carbon Footprints	Loews	The Terrace Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	3:15 PM	380a	The Elements of Sustainability	Loews	The Terrace Room
Tuesday	3:15 PM	368a	Where Does It Go? a History of Solid Waste Disposal, Flow Control and Recycling	Loews	Lescaze Room
Wednesday	8:30 AM	450b	An Investor Perspective on Biofuels Commercialization and the Developing Bioeconomy	PNCC	Room 201-C
Wednesday	8:30 AM	450a	Bioenergy Conversion and Science – Challenges in Making Cellulosic Fuels	PNCC	Room 201-C
Wednesday	8:30 AM	450c	Biofuels: Unlocking the Potential	PNCC	Room 201-C
Wednesday	8:30 AM	394e	Catalytic Decarboxylation of Oleic Acid Over Ceria-Zirconia Catalysts	PNCC	Room 103-B
Wednesday	8:30 AM	395c	New Biobased Materials from Co-Products	PNCC	Room 204-A
Wednesday	8:30 AM	450d	Poet's Vision for the Future of Biorefining	PNCC	Room 201-C
Wednesday	8:30 AM	449c	Principles of Sustainable Energy Course at Ohio State University	Loews	Lescaze Room
Wednesday	8:30 AM	450e	Process Engineering of Renewable Resources for Ethanol Production	PNCC	Room 201-C
Wednesday	8:30 AM	438c	Process and Economic Simulation of Wastewater Plants for Lipid Feedstock Production through Use of Superpro Designer	Loews	Washington A Room
Wednesday	8:30 AM	394f	Product and Process Effects of Alternative Solid Fuels Usage at a Portland Cement Manufacturing Site	PNCC	Room 103-B
Wednesday	8:30 AM	438d	Solar-Thermal Processing for Sustainable Production of Chemicals and Fuels	Loews	Washington A Room
Wednesday	8:30 AM	449g	Sustainability Engineering Workshop at Asee 2007 Summer School	Loews	Lescaze Room
Wednesday	8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday	12:30 PM	458b	A Process Integration Approach to Strategic Design and Scheduling of Multi-Feedstock Biodiesel Plants	PNCC	Room 201-B
Wednesday	12:30 PM	459b	Biobased Plastic Derived from Cereal Proteins	PNCC	Room 204-A
Wednesday	12:30 PM	459e	Biocomposite Materials for Building and Industrial Application	PNCC	Room 204-A
Wednesday	12:30 PM	479a	Bioenergy Development through University Research Centers	Loews	The Terrace Room
Wednesday	12:30 PM	511c	Biological Pretreatment of Lignocellulosic Biomass during Wet Storage and Its Impact on Downstream Biorefinery Processes	PNCC	Room 202-A
Wednesday	12:30 PM	511d	Biomass Feedstock Removal and Transport Optimization	PNCC	Room 202-A
Wednesday	12:30 PM	482b	Computational Identification of Small RNAs In Clostridium Acetobutylicum and Prediction of mRNA Targets	Loews	Washington C Room
Wednesday	12:30 PM	460a	Defining Enzyme Inhibitors for Cellulose Hydrolysis	PNCC	Room 202-B
Wednesday	12:30 PM	511f	Development of Feedstock Quality Specifications for Optimizing Biofuels Conversion Processes	PNCC	Room 202-A
Wednesday	12:30 PM	460c	Enzymatic Hydrolysis of Afex Treated Corn Stover by Cellulolytic and Hemicellulolytic Synergistic Enzyme Cocktails	PNCC	Room 202-B
Wednesday	12:30 PM	460d	Evaluation of Cellulose Reactivity with Purified Enzyme Components during Hydrolysis	PNCC	Room 202-B
Wednesday	12:30 PM	459c	Multifunctional Nanobiocomposites	PNCC	Room 204-A
Wednesday	12:30 PM	511e	Providing a Sustained Biomass Supply: Implications of Feedstock Variation	PNCC	Room 202-A
Wednesday	12:30 PM	515b	Solubility of Small-Chain Fatty Acids In Supercritical Carbon Dioxide	PNCC	Room 105-B
Wednesday	12:30 PM	511a	Sustainable Biofuel Production: A DOE Perspective	PNCC	Room 202-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday 12:30 PM	511b	Sustainable Strategies for Biofuel Production	PNCC	Room 202-A
Wednesday 12:30 PM	460e	Understanding and Harnessing the Microbial Fermentation of Glycerol. A New Path for the Production of Biochemicals	PNCC	Room 202-B
Wednesday 12:30 PM	500e	Unraveling Entanglements and Polymer Rheology	PNCC	Room 103-C
Wednesday 3:15 PM	537b	Alkaline-Urea Pretreatment to Improve the Accessibility of Enzyme in Woodchips for the Biofuel Production	PNCC	Room 204-A
Wednesday 3:15 PM	542e	Analysis and Design of Integrated Industrial and Ecological Systems for a Greener Cellulosic Ethanol	PNCC	Room 202-B
Wednesday 3:15 PM	537d	Chemical Analysis and Kinetics of Wood Extract Hydrolysis	PNCC	Room 204-A
Wednesday 3:15 PM	542d	Developing a Sustainable Integrated Corn-Based Biorefinery	PNCC	Room 202-B
Wednesday 3:15 PM	563d	Experimental Kinetic Analysis of Steam and CO ₂ Gasification of Biomass Fuels	Loews	Lescaze Room
Wednesday 3:15 PM	537a	Hot-Water Extraction and Forest Biorefinery	PNCC	Room 204-A
Wednesday 3:15 PM	556d	Hydrolytic Degradation Studies of Renewable Copolymers	PNCC	Room 103-C
Wednesday 3:15 PM	542c	Life Cycle Analysis of Alternatives for Diesel: An Assessment of Inputs, Study Assumptions and Feedstock Type	PNCC	Room 202-B
Wednesday 3:15 PM	542f	Life Cycle Assessment of Renewable Transportation Fuel Feedstocks	PNCC	Room 202-B
Wednesday 3:15 PM	542b	Life Cycle Assessment of the Pyrolysis of Corn Stover into Green Gasoline and Green Diesel	PNCC	Room 202-B
Wednesday 3:15 PM	533f	Optimization of An All-Atom Additive Charmm Force Field for Glycosyl Linked Hexo-Pyranoses	PNCC	Room 104-B
Wednesday 3:15 PM	537e	Production of Ethanol from Forest Residues	PNCC	Room 204-A
Wednesday 3:15 PM	563b	Synergistic Use of Solar Hydrogen with Biomass to Produce Biofuels	Loews	Lescaze Room
Wednesday 6:00 PM	573q	A Preliminary Investigation into the Relative Amount of Enzyme Deactivation from Enzyme-Substrate Interactions and Non-Specific Deactivation	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573y	A Simplified Approach to Aspen-Plus [®] Mass and Energy Balances for Preliminary Process Analysis and Economic Feasibility of Pyrolysis of Switchgrass to Bio-Oil	PNCC	Exhibit Hall A
Wednesday 6:00 PM	571at	Anaerobic Treatment of Cattle Manure for Biogas Production	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573p	Bioethanol Production from Barley Hull Using Saa (Soaking in Aqueous Ammonia) Pretreatment	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573af	Biogas to Syngas Catalysis-Renewable Process for Fischer-Tropsch Liquid Fuels	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573ae	Biorefinery Product Allocation Using a Flexible Optimization Framework	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573ac	Cellulase Production from Treated Lignocellulosic Agricultural Residues Supplemented with Paper Sludge	PNCC	Exhibit Hall A
Wednesday 6:00 PM	571ba	Development and Application of High-Throughput Flow-Cytometric Techniques for Analyzing Prokaryotic Cell Cultures	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573l	Development of Enzyme Magnetic Nanoparticle Complexes for Cellulose Hydrolysis	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573m	Effect of Mixing on Enzymatic Hydrolysis of Cellulosic Biomass	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573b	Effects of Dilute Acid Hydrolysis Conditions on Total Sugar Yields from Enzymatic Hydrolysis of North Central Forest Feedstocks	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573e	Effects of Reactor Type on High Solids Enzymatic Hydrolysis of Dilute Acid Pretreated Corn Stover	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	6:00 PM	573h	Enhancing CO-Water Mass Transfer with MCM41 Nanoparticles and Electrolytes	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573f	Equilibrium Adsorption Characteristics of Polysaccharide Adsorbents	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ai	Experimental Kinetic Analysis of CO ₂ and Steam Gasification of Biomass Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573g	Fractionating Recalcitrant Miscanthus by a Two-Stage Treatment Under Mild Reaction Conditions	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573k	Fractionation and Optimization of Switchgrass Pretreatment Via Cellulose-Solvent-Based Lignocellulose Fractionation (CSLF) at Lower Cellulase Loadings	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573j	Improving the Quality of Corn Stover Biomass through Biological Pretreatment	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577u	Industrial Biosystems Engineering: Application of Systems Engineering In Biorefinery Systems	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573c	Kinetic Characterization of Oligomer Formation and Degradation In Dilute Acid Pretreatment of Lignocellulosic Biomass from Forests	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ab	Life Cycle Assessment of Bio-Oil Production by Pyrolysis of Wood	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573o	Novel Cell Surface Display on Lactic Acid Bacteria and Its Application to Lactic Acid Production from Starchy Materials	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573aa	Optimal Allocation of Carbon Resources In An Integrated Biorefinery	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573a	Pretreatment of Rice Straw with Ammonia Recycled Percolation	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573z	Process Optimization for Maximum Ethanol Production Using Different Ethanologens from Afex Treated Rice Straw	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575aj	Rapid Steam Gasification of Biomass In An Aerosol Flow Reactor	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573d	Selection for Improved Hybrid Poplar Via Dilute Acid and Enzymatic Hydrolysis Using Mini-Reactors	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573n	Spore for Robust Enzymatic Hydrolysis of Woody Biomass	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ad	Sustainable Fuel for the Brazilian Transportation Sector	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573v	Synthesis and Analysis of a Flexible Multi-Feedstock Biodiesel Production Process	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573i	Use of Immunolabeling to Study Changes in the Distribution of Xylan in the Plant Cell Wall to Better Understand the Process of Xylan Hydrolysis during Dilute Acid Pretreatment	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573x	Viscosity Measuring Techniques for Biomass Solids Slurries Using Experimental and Computational Methods	PNCC	Exhibit Hall A
Thursday	8:30 AM	597a	Analysis of Transport Phenomena & Modeling the Behavior of Single Particle during Drying Process	Loews	Washington B Room
Thursday	8:30 AM	584b	Aqueous-Phase Hydrogenation of Acetic Acid on Monometallic Catalysts. A Combined Experimental and Theoretical Study	PNCC	Room 202-B
Thursday	8:30 AM	623b	Biomass Gasification in a Stoker Gasifier	PNCC	Room 204-A
Thursday	8:30 AM	623c	Biorefinoptm. A Practical Tool for Process Design and Economic Analysis of Integrated Biorefineries	PNCC	Room 204-A
Thursday	8:30 AM	583h	Catalytic Hydrodeoxygenation of Liquid Biomass for Hydrocarbon Fuels	PNCC	Room 113-A
Thursday	8:30 AM	584d	Characterization of Ni-Based Catalysts Used for Steam Reforming of Simulated Biomass Gasification Vapors	PNCC	Room 202-B
Thursday	8:30 AM	583c	Comparative Analysis of Biodiesel Production from Waste Cooking Oil Using Ferric Sulfate and Sulfuric Acid	PNCC	Room 113-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	8:30 AM	583e	Conversion of Acetic Acid and Acetone to Hydrocarbon on Titania Based Catalysts	PNCC	Room 113-A
Thursday	8:30 AM	586c	Developing and Integrating Sustainable Chemical Processes into Existing Petro-Chemical Plant Complexes	Marriott	Room 502
Thursday	8:30 AM	617e	Effect of Liquid Hot Water Pretreatment on Switchgrass Hydrolysis	PNCC	Room 202-A
Thursday	8:30 AM	617d	Effect of Upland Vs. Lowland Variety on Sugar Yields Following Ammonia Fiber Expansion (AFEX) Pretreatment and Enzymatic Hydrolysis of Shawnee and Alamo Switchgrass	PNCC	Room 202-A
Thursday	8:30 AM	597e	Equilibrium Moisture Content and Drying Analysis of Biosolids	Loews	Washington B Room
Thursday	8:30 AM	623d	Experience with Ash Modifiers to Control Pluggage of Biomass Furnaces and Heat Transfer Surfaces	PNCC	Room 204-A
Thursday	8:30 AM	583d	Impact of Oxygen Incorporation In Molecular Structure on Pyrolytic Soot Formation and Oxidizability	PNCC	Room 113-A
Thursday	8:30 AM	620f	Improving Complex Phenotypes by Mutagenesis of the Bacterial RNA-Polymerase Holoenzyme: New Approaches for Transcriptional Engineering	PNCC	Room 307-B
Thursday	8:30 AM	584a	Investigating Adsorbate Structures of Cyclic C4 Oxygenates from Biomass on Catalytic Metal Surfaces Using Spectroscopic Techniques	PNCC	Room 202-B
Thursday	8:30 AM	583a	Investigation of Esterification of Biomass Pyrolysis Acids Over Sulfonic Acid-Functionalized Mesoporous Silicas	PNCC	Room 113-A
Thursday	8:30 AM	620e	Knockout of Transcriptional Regulators for Decoupling Solvent Formation from Sporulation In Clostridium Acetobutylicum	PNCC	Room 307-B
Thursday	8:30 AM	584c	Millisecond Autothermal Steam Reforming of Cellulose by Reactive Flash Volatilization	PNCC	Room 202-B
Thursday	8:30 AM	617c	Pretreatment of Switch Grass by Aqueous Ammonia	PNCC	Room 202-A
Thursday	8:30 AM	617a	Process Modeling Results of Various Leading Pretreatment Technologies for Corn Stover and Hybrid Poplar	PNCC	Room 202-A
Thursday	8:30 AM	623a	Renewable Fuels Combustion Technologies	PNCC	Room 204-A
Thursday	8:30 AM	617b	Short-Term Lime Pretreatment: Woody Vs Herbaceous Biomass	PNCC	Room 202-A
Thursday	8:30 AM	617f	Sugar Yields from Switchgrass for the Coupled Operations of Dilute Acid and Sulfur Dioxide Pretreatment and Enzymatic Hydrolysis	PNCC	Room 202-A
Thursday	8:30 AM	582f	Syngas Conversion to Gasoline Over Fe/zsm-5	PNCC	Room 102-A
Thursday	8:30 AM	588e	Teaching Nanoscale Science and Engineering to Chemical Engineers at Georgia Tech	PNCC	Room 104-B
Thursday	8:30 AM	584e	Techno-Economic Study of the Production of Mixed Alcohols from Lignocellulosic Biomass Using Direct Gasification	PNCC	Room 202-B
Thursday	12:30 PM	634f	A Comprehensive Look at the Acidic Hydrolysis of Loblolly Pine Sawdust	PNCC	Room 113-A
Thursday	12:30 PM	639b	A Scraped Surface Bio-Reactor for Batch Enzymatic Saccharification of Pretreated Corn Stover Slurries	PNCC	Room 203-A
Thursday	12:30 PM	643a	Activated Carbon Derived from Fast Pyrolysis Liquids Production of Agricultural Residues and Energy Crops	Marriott	Salon I
Thursday	12:30 PM	635d	Biomass Gasification for Hydrogen Production	Loews	Howe Room
Thursday	12:30 PM	634c	Catalytic Deoxygenation of Benzaldehyde Over Supported Gallium Catalysts	PNCC	Room 113-A
Thursday	12:30 PM	634b	Conversion of Biomass-Derived Polyols Over Carbon Supported Pt-Re Catalysts	PNCC	Room 113-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	12:30 PM	639e	Conversion of Lignocellulosic Sugars to Triacylglycerols: A Renewable Diesel Feedstock	PNCC	Room 203-A
Thursday	12:30 PM	636f	Conversion of Loblolly Pine Wood In Ionic Liquids	PNCC	Room 202-B
Thursday	12:30 PM	639f	Demonstration of a Viable Hydrogenase Assay for Syngas Fermentation to Ethanol: Quantitative Accounting for Competing Reactions, Enzyme Inhibition, and Diffusion Limitations	PNCC	Room 203-A
Thursday	12:30 PM	631f	Effect of Carbonic Anhydrases on Carbonation of Mg-Bearing Minerals for Environmentally-Benign Carbon Sequestration	Marriott	Salon K
Thursday	12:30 PM	664e	Efficient Sugar Release from Common Reed Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation at Lower Cellulase Loadings	PNCC	Room 202-A
Thursday	12:30 PM	639a	Enhancement of Enzymatic Digestibility of Microcrystalline Cellulose by Treatment in Subcritical Water	PNCC	Room 203-A
Thursday	12:30 PM	639c	Enzo-Rheology: Investigations of High-Solids Biomass Slurries for Bio-Refinery Applications	PNCC	Room 203-A
Thursday	12:30 PM	633f	Fischer-Tropsch Synthesis Over Mo/zeolite Catalysts	PNCC	Room 102-A
Thursday	12:30 PM	634a	Gas Phase Processing of Sorbitol	PNCC	Room 113-A
Thursday	12:30 PM	664a	High Yield Biorefining Using Organosolv Processing	PNCC	Room 202-A
Thursday	12:30 PM	665c	Integrated Biorefinery Approach in a Conventional Kraft Pulp Mill Using Hemicellulose Pre-Extraction for Ethanol Production	PNCC	Room 204-A
Thursday	12:30 PM	664d	Integrated High Throughput Pretreatment and Enzymatic Hydrolysis In 96 Well Plates	PNCC	Room 202-A
Thursday	12:30 PM	664f	Lignin Mobility In Pretreated Corn Stover	PNCC	Room 202-A
Thursday	12:30 PM	634e	Millisecond Autothermal Catalytic Partial Oxidation of Glycerol to Syngas and Chemicals	PNCC	Room 113-A
Thursday	12:30 PM	664b	Mixtures Effects and Kinetic Characterization of Timber and Switchgrass Diluted Acid Hydrolysis	PNCC	Room 202-A
Thursday	12:30 PM	641c	Networked Control and Scheduling of Distributed Energy Resources: Application to Biomass Gas-Fueled Fuel Cell Networks	PNCC	Room 204-C
Thursday	12:30 PM	639d	Size Reduction Fundamentals for Biomass Conversion	PNCC	Room 203-A
Thursday	12:30 PM	634d	Steam Reforming of Different Fractions of Biomass Pyrolysis Liquids	PNCC	Room 113-A
Thursday	12:30 PM	644f	Study on Supercritical Water Behavior of Bitumen	PNCC	Room 105-A
Thursday	12:30 PM	633c	Synthesis of, Characterization of and Catalytic SWNT Synthesis on Pt-Co-Mcm-41	PNCC	Room 102-A
Thursday	12:30 PM	664c	The Effects of Impregnation Techniques on Pretreatment Performance for High Dry Matter Dilute Sulfuric Acid Processes	PNCC	Room 202-A
Thursday	3:15 PM	694a	A Preliminary Physical-Chemical Analysis of Steam Reforming of Biogas from a Small Wastewater Treatment System of a University Campus	Loews	Howe Room
Thursday	3:15 PM	696c	Biological Conversion of Municipal Solid Waste to Ethanol	PNCC	Room 202-A
Thursday	3:15 PM	685d	Biomass Gasification: Catalytic Tar Removal Using Ni-Zeolite Catalysts	PNCC	Room 113-A
Thursday	3:15 PM	685b	Catalytic Gasification of Biomass In Supercritical Water	PNCC	Room 113-A
Thursday	3:15 PM	696b	Enzymatic Hydrolysis and Ethanol Production from Afex Pretreated Bagasse at High Solid Loading Using Recombinant Ethanologens	PNCC	Room 202-A
Thursday	3:15 PM	690g	Estimation of Parameters for the Bohart-Adams Model	PNCC	Room 111-B
Thursday	3:15 PM	685c	Investigation of High Temperature Gasification of Biomass In An Aerosol Flow Reactor	PNCC	Room 113-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	685e	Low-Temperature Gasification of Cellulosic Biomass	PNCC	Room 113-A
Thursday	3:15 PM	685f	Mechanism of Thermal Decomposition of Furan	PNCC	Room 113-A
Thursday	3:15 PM	678e	Pilot-Scale Evaluation of Fluidizable Reforming Catalyst for Biomass Syngas Cleanup	PNCC	Room 106-B
Thursday	3:15 PM	685a	Product Distribution from Fast Pyrolysis of Polysaccharides	PNCC	Room 113-A
Thursday	3:15 PM	689d	Production of Green Diesel by Hydrocracking of Canola Oil on Ni-Mo/ γ -Al ₂ O ₃ and Pt-Zeolite Based Catalysts	PNCC	Room 203-A
Thursday	3:15 PM	678d	Supercritical Reactivation of Fischer Tropsch Catalysts	PNCC	Room 106-B
Thursday	3:15 PM	696a	Sustainable Biomass Based Biorefinery	PNCC	Room 202-A
Thursday	6:00 PM	722am	Development and Characterization of Copolymers from Renewable Resource Monomers	PNCC	Exhibit Hall A
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Thursday	6:00 PM	722ao	One-Step Functionalization of Cellulosic Nanowhiskers Using Renewable Reagents	PNCC	Exhibit Hall A
Thursday	6:00 PM	720c	Sugaring-out. A Novel Phase Separation and Extraction System	PNCC	Exhibit Hall A
Friday	8:00 AM	743e	A Kinetic Model for Supercritical Water Gasification of Biomass	PNCC	Room 202-A
Friday	8:00 AM	725b	Cellulase Production from Paper Mill Sludge by Trichoderma Reesei Rut C-30	Loews	Lescaze Room
Friday	8:00 AM	725d	Characterization of Fast Pyrolysis Oils from Woody Biomass and Poultry Litter	Loews	Lescaze Room
Friday	8:00 AM	743g	Effects of Volatile-Char Interaction on the Char Reactivity In the Biomass Gasification	PNCC	Room 202-A
Friday	8:00 AM	727f	Fischer-Tropsch Synthesis by Nb ₂ O ₅ -Supported Iron or Cobalt Catalysts	PNCC	Room 104-B
Friday	8:00 AM	743f	Flash Carbonization of Sewage Sludge: Assessment of Sewage Sludge Charcoal Land Application	PNCC	Room 202-A
Friday	8:00 AM	741e	Glucose Fermentation Under Carbon Dioxide Pressure	PNCC	Room 105-B
Friday	8:00 AM	743b	Hydrolysis of Microcrystalline Cellulose In Subcritical and Supercritical Water In a Continuous Flow Reactor	PNCC	Room 202-A
Friday	8:00 AM	743d	Hydrothermal Biomass Chemistry: Protein-Carbohydrate Interactions	PNCC	Room 202-A
Friday	8:00 AM	743c	Hydrothermal Pretreatment of Rubber Wood for Ethanol Production	PNCC	Room 202-A
Friday	8:00 AM	725a	Simulation of Pulp Mill Black Liquor Gasification with Gibbs Free Energy Minimization Approach	Loews	Lescaze Room
Friday	8:00 AM	743a	Small-Scale Biorefinery Process for Sustainable Local Biomass Utilization	PNCC	Room 202-A
Friday	8:00 AM	738f	The Effects of Substitution and Degree of Polymerization on the Pka Values of Polymeric Polystyrene Sulfonic Acids	PNCC	Room 103-C
Friday	8:00 AM	734e	The Effects of Water Structure on the Kinetics and Thermodynamics of Xylan Hydrolysis	PNCC	Room 103-A
Friday	10:30 AM	750d	Design and Analysis of Sustainable Biomass Utilization Systems In Local Communities	PNCC	Room 106-A/B
Friday	10:30 AM	750c	Mathematical Models In Input-Output Analysis of Economic and Ecological Systems	PNCC	Room 106-A/B
Friday	10:45 AM	753b	Biocrude Production from Switchgrass Using Subcritical Water	PNCC	Room 203-A
Friday	10:45 AM	753a	Biofuel Generation from Cheese Whey In a Two –Stage Anaerobic Process	PNCC	Room 203-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Friday	10:45 AM	757e	Fast Pyrolysis of Guayule Residues	PNCC	Room 202-A
Friday	10:45 AM	757d	Hydrogenations of Biomass-Related Substrates In Supercritical Media	PNCC	Room 202-A
Friday	10:45 AM	761e	Improving Catalytic Hot Gas Cleaning in Biomass Gasification by Oxygen Addition	PNCC	Room 202-B
Friday	10:45 AM	758c	Influence of Support and Promoter on the Activity and Selectivity of Rh Catalysts for the Direct Conversion of Syngas to Ethanol	PNCC	Room 104-B
Friday	10:45 AM	757b	Naphthalene Steam Reforming Over Ni/Ce _{0.75} Zr _{0.25} -xMnxO ₂ (x = 0, 0.10, 0.20 and 0.25) Mixed Oxide Catalysts	PNCC	Room 202-A
Friday	10:45 AM	765c	Predicting Translation Initiation Rate from RNA Sequence	PNCC	Room 113-C
Friday	10:45 AM	751d	Production of Organic Acid Esters by Extractive Fermentation and Enzymatic Esterification	PNCC	Room 103-C
Friday	10:45 AM	757f	Production of Stable and up-Gradable Pyrolysis Liquid Transportation Fuel Intermediates from Lignin and Related Biomass	PNCC	Room 202-A
Friday	10:45 AM	757c	Steam Gasification Reactivity of Char from Rapid Pyrolysis of Bio-Oil/char Slurry	PNCC	Room 202-A
Friday	10:45 AM	757a	Tar Reforming Catalyst Development and Scale up for Use In a Biomass Gasification Pilot Plant	PNCC	Room 202-A

ETHANOL

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5aq	Biological Production of Renewable Energies from Waste Materials	PNCC	Exhibit Hall A
Sunday	1:00 PM	5co	Incorporation of Non-Linear Methods into Genome-Scale Models: Expanding the Model for the Butanol Producer <i>Clostridium Acetobutylicum</i>	PNCC	Exhibit Hall A
Monday	8:30 AM	12f	Development of Efficient Organisms Using a Combination of Rational Strain Design and Metabolic Evolution	PNCC	Room 113-C
Monday	8:30 AM	14b	Engineering <i>Escherichia Coli</i> for Improved Ethanol and Butanol Tolerance for Biofuel Production	PNCC	Room 106-B
Monday	8:30 AM	30b	Experimental Study of Water and Ethanol Adsorption and Desorption in Adiabatic Fixed Bed on a-Type Zeolites	Marriott	Salon I
Monday	8:30 AM	51c	Finding Needles In Haystacks: Functional Genomics and Extremophile Biotechnology	Loews	Washington C Room
Monday	8:30 AM	14e	High Throughput Approach for Identifying Pentose Fermenting Microbes In the Environment	PNCC	Room 106-B
Monday	8:30 AM	14c	Integrating Systems and Synthetic Biology to Optimize Biofuel Pathways In Microorganisms	PNCC	Room 106-B
Monday	8:30 AM	21c	Steam Reforming of Ethanol Over ZnO and ZnO/Al ₂ O ₃ Supported Catalysts	PNCC	Room 203-A
Monday	8:30 AM	9b	Yeast Surface Display Mini-Cellulosome for Cellulose Hydrolysis	PNCC	Room 107-A
Monday	12:30 PM	96e	Advances toward Obtaining Kinetics from Reactive Molecular Dynamics	PNCC	Room 102-A
Monday	12:30 PM	64g	Changes of Cellulose Reactivity with Purified Enzyme Components during Hydrolysis	PNCC	Room 107-A
Monday	12:30 PM	69a	Complete Microbiological Fuel Cell. A Photosynthetic Cathode Coupled to a Fermentative Anode	PNCC	Room 106-B
Monday	12:30 PM	104b	Liquid-Liquid Extraction of Alcohols from Water Using Ionic Liquids	Marriott	Franklin 4
Monday	12:30 PM	118a	Preliminary Design of Bioethanol Process Plants	PNCC	Exhibit Hall A
Monday	12:30 PM	109f	Separations Challenges in Aqueous Separations	Loews	Commonwealth C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	123d	The Effects of the Renewable Portfolio Standards In the State of Alabama	Marriott	Salon C
Monday	12:30 PM	69c	The Influence of Redox Potential and Sulfide Concentration In the Fermentation of Syngas to Ethanol	PNCC	Room 106-B
Monday	12:30 PM	63d	Thermodynamic Analysis of Adsorption Enhanced Reforming Processes	Marriott	Salon I
Monday	3:15 PM	156d	Bivariate Population Balance Model of Ethanol-Fueled Spray Combustors	PNCC	Room 109-B
Monday	3:15 PM	179a	Membrane Extraction for Acetic Acid and Lignin Removal from Biomass Hydrolysates	Loews	Congress A Room
Monday	3:15 PM	146d	Microbial Fermentation of Glycerol for the Production of Ethanol	PNCC	Room 106-B
Monday	3:15 PM	146f	Sludges-to-Ethanol as a Supplementary Unit In Kraft Paper Mill	PNCC	Room 106-B
Monday	3:15 PM	175a	Synthetic Membrane Filtration: Breakthroughs and Needs	Loews	Commonwealth B
Tuesday	8:30 AM	246c	Adsorption In Zeolites for Detoxification of Lignocellulosic Biomass	Loews	Washington B Room
Tuesday	8:30 AM	193a	An International Assessment of Research in Catalysis by Nanostructured Materials	PNCC	Room 103-B
Tuesday	8:30 AM	197b	Computational Analysis of Yeast Xylose Metabolism	PNCC	Room 307-B
Tuesday	8:30 AM	197d	Elucidating Mechanisms of Acetate Tolerance In E. Coli Using Scales	PNCC	Room 307-B
Tuesday	8:30 AM	246d	Energy Efficient Hybrid Vapor Stripping-Vapor Permeation Process for Ethanol Recovery and Dehydration	Loews	Washington B Room
Tuesday	8:30 AM	197a	Identification of Potential Target Pathways of Recombinant Yeast for Increasing Bioethanol Productivity: In Silico Analysis Using Cybernetic Models	PNCC	Room 307-B
Tuesday	8:30 AM	226c	Industrial Application of Cpfd to Biomass Gasification	Marriott	Franklin 2
Tuesday	8:30 AM	219a	Innovative Autothermal Reforming Using Hydrogen Peroxide as Oxidant for Portable Fuel Cells	PNCC	Room 113-C
Tuesday	8:30 AM	209b	Kinetic and Process Study for Ethanol Reforming Using a Pt/Rh Washcoated Monolith Catalyst	PNCC	Room 103-A
Tuesday	8:30 AM	251e	Multiplex Recombineering: Progress toward the Multigenic Insertion of Regulatory Elements and Potential Applications In Metabolic Engineering	Loews	Washington C Room
Tuesday	8:30 AM	197c	The Dynamic Biomass Constituting Equation for the Genome-Scale Model of the Biofuels Producer Clostridium Acetobutylicum	PNCC	Room 307-B
Tuesday	8:30 AM	199c	The Spectroscopic Signature Nitrogen-Substituted Zeolites	PNCC	Room 201-C
Tuesday	12:30 PM	259a	40 Years of Surface Science at Stanford: A Kinetic Perspective	Loews	Commonwealth B
Tuesday	12:30 PM	316a	Design of a Hybrid Distillation-Pervaporation Bio-Ethanol Purification Process Using Conceptual Design and Rigorous Simulation Tools	PNCC	Room 204-C
Tuesday	12:30 PM	291c	DuPont: Building on the Past towards a Sustainable Future	Loews	Washington C Room
Tuesday	12:30 PM	259d	Gold Atom Release In Surface Oxidation Reactions	Loews	Commonwealth B
Tuesday	12:30 PM	267a	Impacts of New Technologies and Policies on Biofuels Production and Trade	PNCC	Room 113-B
Tuesday	12:30 PM	290e	Membrane Aided Reclamation of Waste Chemical Streams	PNCC	Room 106-A
Tuesday	12:30 PM	293b	Simulation of An Industrial Plant of Anhydrous Ethanol Production from Sugar Cane Juice	PNCC	Room 201-B
Tuesday	3:15 PM	330a	Global View of Technical Aspects of Fuel Ethanol Production	PNCC	Room 113-B
Tuesday	3:15 PM	341a	Reducing the Energy Demand of Bio-Ethanol through Salt-Extractive Distillation and Electrodialysis	Marriott	Franklin 4
Tuesday	3:15 PM	380a	The Elements of Sustainability	Loews	The Terrace Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday 8:30 AM	450b	An Investor Perspective on Biofuels Commercialization and the Developing Bioeconomy	PNCC	Room 201-C
Wednesday 8:30 AM	450a	Bioenergy Conversion and Science – Challenges in Making Cellulosic Fuels	PNCC	Room 201-C
Wednesday 8:30 AM	395c	New Biobased Materials from Co-Products	PNCC	Room 204-A
Wednesday 8:30 AM	450d	Poet's Vision for the Future of Biorefining	PNCC	Room 201-C
Wednesday 8:30 AM	450e	Process Engineering of Renewable Resources for Ethanol Production	PNCC	Room 201-C
Wednesday 8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday 12:30 PM	479a	Bioenergy Development through University Research Centers	Loews	The Terrace Room
Wednesday 12:30 PM	511c	Biological Pretreatment of Lignocellulosic Biomass during Wet Storage and Its Impact on Downstream Biorefinery Processes	PNCC	Room 202-A
Wednesday 12:30 PM	460a	Defining Enzyme Inhibitors for Cellulose Hydrolysis	PNCC	Room 202-B
Wednesday 12:30 PM	458a	Design of An on-Farm Ethanol Dewatering System	PNCC	Room 201-B
Wednesday 12:30 PM	511f	Development of Feedstock Quality Specifications for Optimizing Biofuels Conversion Processes	PNCC	Room 202-A
Wednesday 12:30 PM	460c	Enzymatic Hydrolysis of Afex Treated Corn Stover by Cellulolytic and Hemicellulolytic Synergistic Enzyme Cocktails	PNCC	Room 202-B
Wednesday 12:30 PM	460d	Evaluation of Cellulose Reactivity with Purified Enzyme Components during Hydrolysis	PNCC	Room 202-B
Wednesday 12:30 PM	460f	Improve Hydrolysis Rate by Displaying Multi-Complex of Cellulolytic Enzymes and Produce Ethanol In One-Step Process	PNCC	Room 202-B
Wednesday 12:30 PM	505a	Low-Cost H2 Production for Fuel Cells Using Adsorption Enhanced Reforming	Marriott	Salon K
Wednesday 12:30 PM	460b	Production of Biofuels by Simultaneous Utilization of Mixed Sugars	PNCC	Room 202-B
Wednesday 12:30 PM	511e	Providing a Sustained Biomass Supply: Implications of Feedstock Variation	PNCC	Room 202-A
Wednesday 12:30 PM	511a	Sustainable Biofuel Production: A DOE Perspective	PNCC	Room 202-A
Wednesday 12:30 PM	511b	Sustainable Strategies for Biofuel Production	PNCC	Room 202-A
Wednesday 12:30 PM	505b	Technology Developments In Psa Ethanol Dehydration	Marriott	Salon K
Wednesday 12:30 PM	460e	Understanding and Harnessing the Microbial Fermentation of Glycerol. A New Path for the Production of Biochemicals	PNCC	Room 202-B
Wednesday 3:15 PM	537b	Alkaline-Urea Pretreatment to Improve the Accessibility of Enzyme in Woodchips for the Biofuel Production	PNCC	Room 204-A
Wednesday 3:15 PM	542e	Analysis and Design of Integrated Industrial and Ecological Systems for a Greener Cellulosic Ethanol	PNCC	Room 202-B
Wednesday 3:15 PM	542d	Developing a Sustainable Integrated Corn-Based Biorefinery	PNCC	Room 202-B
Wednesday 3:15 PM	563c	Effect of Bsa Treatment of Cellulosic Biomass on Batch and Continuous Enzymatic Hydrolysis	Loews	Lescaze Room
Wednesday 3:15 PM	544c	Effect of Fermentation Broth Components on Performance of High Silica Zsm-5/silicone Rubber Mixed Matrix Membranes	Loews	Washington B Room
Wednesday 3:15 PM	537f	Effect of Surfactants, Flocculants and Hydrolyzing Method on Centrate Recovery from Whole Stillage In Corn Bio-Ethanol Plant	PNCC	Room 204-A
Wednesday 3:15 PM	537a	Hot-Water Extraction and Forest Biorefinery	PNCC	Room 204-A
Wednesday 3:15 PM	542f	Life Cycle Assessment of Renewable Transportation Fuel Feedstocks	PNCC	Room 202-B
Wednesday 3:15 PM	532e	Modifying a U.O. Lab Experiment to Make Ethanol Fuel from Grain	Marriott	Salon L

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	3:15 PM	537e	Production of Ethanol from Forest Residues	PNCC	Room 204-A
Wednesday	3:15 PM	543e	Steam Reforming of Ethanol (SRE) In a Palladium Based Membrane Reactor Over Nickel Catalyst	Loews	Congress A Room
Wednesday	6:00 PM	575aw	A Kinetic and Process Study for Ethanol Reforming Using a Pt/Rh Washcoated Monolith Catalyst	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573q	A Preliminary Investigation into the Relative Amount of Enzyme Deactivation from Enzyme-Substrate Interactions and Non-Specific Deactivation	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573p	Bioethanol Production from Barley Hull Using Saa (Soaking in Aqueous Ammonia) Pretreatment	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ac	Cellulase Production from Treated Lignocellulosic Agricultural Residues Supplemented with Paper Sludge	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578l	Design of Ethanol Dehydration Process: Heterogeneous Azeotropic Distillation Vs. Extractive Distillation	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573l	Development of Enzyme Magnetic Nanoparticle Complexes for Cellulose Hydrolysis	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573m	Effect of Mixing on Enzymatic Hydrolysis of Cellulosic Biomass	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573b	Effects of Dilute Acid Hydrolysis Conditions on Total Sugar Yields from Enzymatic Hydrolysis of North Central Forest Feedstocks	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573f	Equilibrium Adsorption Characteristics of Polysaccharide Adsorbents	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573k	Fractionation and Optimization of Switchgrass Pretreatment Via Cellulose-Solvent-Based Lignocellulose Fractionation (CSLF) at Lower Cellulase Loadings	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578z	Global Sensitivity Analysis: Estimation of Sensitivity Indexes in Metabolic Network Dynamic Models	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573j	Improving the Quality of Corn Stover Biomass through Biological Pretreatment	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577u	Industrial Biosystems Engineering: Application of Systems Engineering In Biorefinery Systems	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573c	Kinetic Characterization of Oligomer Formation and Degradation In Dilute Acid Pretreatment of Lignocellulosic Biomass from Forests	PNCC	Exhibit Hall A
Wednesday	6:00 PM	574k	Modeling and Control of a Packed Distillation Column	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573z	Process Optimization for Maximum Ethanol Production Using Different Ethanologens from Afex Treated Rice Straw	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573d	Selection for Improved Hybrid Poplar Via Dilute Acid and Enzymatic Hydrolysis Using Mini-Reactors	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573n	Spore for Robust Enzymatic Hydrolysis of Woody Biomass	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ad	Sustainable Fuel for the Brazilian Transportation Sector	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573i	Use of Immunolabeling to Study Changes in the Distribution of Xylan in the Plant Cell Wall to Better Understand the Process of Xylan Hydrolysis during Dilute Acid Pretreatment	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573x	Viscosity Measuring Techniques for Biomass Solids Slurries Using Experimental and Computational Methods	PNCC	Exhibit Hall A
Thursday	8:30 AM	584b	Aqueous-Phase Hydrogenation of Acetic Acid on Monometallic Catalysts. A Combined Experimental and Theoretical Study	PNCC	Room 202-B
Thursday	8:30 AM	623c	Biorefinoptm. A Practical Tool for Process Design and Economic Analysis of Integrated Biorefineries	PNCC	Room 204-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	8:30 AM	585b	Catalytic Ethanol Decomposition: An Example for Reducing Brute-Force DFT Work for Surface Reactivity by Combining BEP and Scaling Relations	Marriott	Room 309/310
Thursday	8:30 AM	584d	Characterization of Ni-Based Catalysts Used for Steam Reforming of Simulated Biomass Gasification Vapors	PNCC	Room 202-B
Thursday	8:30 AM	586c	Developing and Integrating Sustainable Chemical Processes into Existing Petro-Chemical Plant Complexes	Marriott	Room 502
Thursday	8:30 AM	617e	Effect of Liquid Hot Water Pretreatment on Switchgrass Hydrolysis	PNCC	Room 202-A
Thursday	8:30 AM	617d	Effect of Upland Vs. Lowland Variety on Sugar Yields Following Ammonia Fiber Expansion (AFEX) Pretreatment and Enzymatic Hydrolysis of Shawnee and Alamo Switchgrass	PNCC	Room 202-A
Thursday	8:30 AM	584a	Investigating Adsorbate Structures of Cyclic C4 Oxygenates from Biomass on Catalytic Metal Surfaces Using Spectroscopic Techniques	PNCC	Room 202-B
Thursday	8:30 AM	620e	Knockout of Transcriptional Regulators for Decoupling Solvent Formation from Sporulation In Clostridium Acetobutylicum	PNCC	Room 307-B
Thursday	8:30 AM	584f	Partial Oxidation of Ethanol Over Supported Ni Catalysts: Effect of Support	PNCC	Room 202-B
Thursday	8:30 AM	617c	Pretreatment of Switch Grass by Aqueous Ammonia	PNCC	Room 202-A
Thursday	8:30 AM	617a	Process Modeling Results of Various Leading Pretreatment Technologies for Corn Stover and Hybrid Poplar	PNCC	Room 202-A
Thursday	8:30 AM	617b	Short-Term Lime Pretreatment: Woody Vs Herbaceous Biomass	PNCC	Room 202-A
Thursday	8:30 AM	617f	Sugar Yields from Switchgrass for the Coupled Operations of Dilute Acid and Sulfur Dioxide Pretreatment and Enzymatic Hydrolysis	PNCC	Room 202-A
Thursday	8:30 AM	588e	Teaching Nanoscale Science and Engineering to Chemical Engineers at Georgia Tech	PNCC	Room 104-B
Thursday	8:30 AM	584e	Techno-Economic Study of the Production of Mixed Alcohols from Lignocellulosic Biomass Using Direct Gasification	PNCC	Room 202-B
Thursday	8:30 AM	618a	Tertiary Structure and Properties of a Glycoside Hydrolase Family 44 Endoglucanase from Clostridium Acetobutylicum	PNCC	Room 107-B
Thursday	12:30 PM	639b	A Scraped Surface Bio-Reactor for Batch Enzymatic Saccharification of Pretreated Corn Stover Slurries	PNCC	Room 203-A
Thursday	12:30 PM	639f	Demonstration of a Viable Hydrogenase Assay for Syngas Fermentation to Ethanol: Quantitative Accounting for Competing Reactions, Enzyme Inhibition, and Diffusion Limitations	PNCC	Room 203-A
Thursday	12:30 PM	664e	Efficient Sugar Release from Common Reed Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation at Lower Cellulase Loadings	PNCC	Room 202-A
Thursday	12:30 PM	639c	Enzo-Rheology: Investigations of High-Solids Biomass Slurries for Bio-Refinery Applications	PNCC	Room 203-A
Thursday	12:30 PM	664a	High Yield Biorefining Using Organosolv Processing	PNCC	Room 202-A
Thursday	12:30 PM	665c	Integrated Biorefinery Approach in a Conventional Kraft Pulp Mill Using Hemicellulose Pre-Extraction for Ethanol Production	PNCC	Room 204-A
Thursday	12:30 PM	664b	Mixtures Effects and Kinetic Characterization of Timber and Switchgrass Diluted Acid Hydrolysis	PNCC	Room 202-A
Thursday	12:30 PM	639d	Size Reduction Fundamentals for Biomass Conversion	PNCC	Room 203-A
Thursday	12:30 PM	642c	Synthesis and Characterization of Carbon Supported Pt-Sn and Pt-SnO2 Catalysts and Investigation the Effect of Oxide Phase In Ethanol Electro-Oxidation Reaction	PNCC	Room 303-B
Thursday	12:30 PM	664c	The Effects of Impregnation Techniques on Pretreatment Performance for High Dry Matter Dilute Sulfuric Acid Processes	PNCC	Room 202-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	696c	Biological Conversion of Municipal Solid Waste to Ethanol	PNCC	Room 202-A
Thursday	3:15 PM	677a	Dynamic Flux Balance Models for Simulation and Optimization of <i>Saccharomyces Cerevisiae</i> Fed-Batch Cultures	PNCC	Room 106-A
Thursday	3:15 PM	694c	Economical Analysis of Ethanol Steam Reformer for Hydrogen Production Associated with a Sugarcane Industry	Loews	Howe Room
Thursday	3:15 PM	696b	Enzymatic Hydrolysis and Ethanol Production from Afex Pretreated Bagasse at High Solid Loading Using Recombinant Ethanologens	PNCC	Room 202-A
Thursday	3:15 PM	685f	Mechanism of Thermal Decomposition of Furan	PNCC	Room 113-A
Thursday	3:15 PM	677b	Optimization of Batch and Continuous Fermenters for Increasing Bioethanol Productivity Using Hybrid Cybernetic Models	PNCC	Room 106-A
Thursday	3:15 PM	696e	Quantifying Uncertainties In Biorefinery Options – Using Expert Opinions	PNCC	Room 202-A
Thursday	6:00 PM	719i	Cassava-Based Adsorbent for Removing Water from Ethanol Vapor	PNCC	Exhibit Hall A
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Friday	8:00 AM	728a	Bioprocess Synthesis, Design and Analysis through a Group-Contribution Approach	PNCC	Room 203-B
Friday	8:00 AM	725b	Cellulase Production from Paper Mill Sludge by <i>Trichoderma Reesei</i> Rut C-30	Loews	Lescaze Room
Friday	8:00 AM	741e	Glucose Fermentation Under Carbon Dioxide Pressure	PNCC	Room 105-B
Friday	8:00 AM	738f	The Effects of Substitution and Degree of Polymerization on the Pka Values of Polymeric Polystyrene Sulfonic Acids	PNCC	Room 103-C
Friday	8:00 AM	734e	The Effects of Water Structure on the Kinetics and Thermodynamics of Xylan Hydrolysis	PNCC	Room 103-A
Friday	10:45 AM	751e	Effectiveness of Shear Protective Additives in Enzyme Production by Pelleted <i>Phanerochaete Chrysosporium</i>	PNCC	Room 103-C
Friday	10:45 AM	758c	Influence of Support and Promoter on the Activity and Selectivity of Rh Catalysts for the Direct Conversion of Syngas to Ethanol	PNCC	Room 104-B

BIODIESEL

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5aq	Biological Production of Renewable Energies from Waste Materials	PNCC	Exhibit Hall A
Monday	8:30 AM	14d	Dynamic Modeling of Transesterification In a Simulated Moving Bed Chromatographic Reactor for Biodiesel Production	PNCC	Room 106-B
Monday	8:30 AM	14c	Integrating Systems and Synthetic Biology to Optimize Biofuel Pathways In Microorganisms	PNCC	Room 106-B
Monday	8:30 AM	26e	Investigation of the Dissolution Behavior of Waste Polymers In Biodiesel	PNCC	Room 107-B
Monday	8:30 AM	29b	Nanostructured Catalysts for CO ₂ Hydrogenation to Higher Hydrocarbons	PNCC	Room 103-A
Monday	8:30 AM	9a	Optimization of Immobilization of Lipases on Various Supports for Transesterification of Tributyrin Using Dimethyl Carbonate	PNCC	Room 107-A
Monday	12:30 PM	96e	Advances toward Obtaining Kinetics from Reactive Molecular Dynamics	PNCC	Room 102-A
Monday	12:30 PM	115a	Dependence of the Hydrolytic Degradation of Poly(ester-anhydride) Copolymers on pH, Temperature, and Time	PNCC	Exhibit Hall A
Monday	12:30 PM	69b	Properties of Algal-Based Biodiesel	PNCC	Room 106-B
Monday	12:30 PM	64e	Scaleable Production of Free Fatty Acids In <i>E. Coli</i> : Implications for Biodiesel Production	PNCC	Room 107-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	96d	Selective Oxidation Reactions Catalyzed by Au In the Aqueous Phase	PNCC	Room 102-A
Monday	12:30 PM	123d	The Effects of the Renewable Portfolio Standards In the State of Alabama	Marriott	Salon C
Monday	3:15 PM	146c	Fatty Acid and Lipid Accumulation In Municipal Wastewater Microorganisms Growing on a Nitrogen-Limited Synthetic Wastewater Medium	PNCC	Room 106-B
Monday	3:15 PM	146e	Production of Butanol from Biodiesel Derived Crude Glycerol Using Pure Cultures of <i>C. Pasteurianum</i> (ATCC 6013)	PNCC	Room 106-B
Monday	3:15 PM	175a	Synthetic Membrane Filtration: Breakthroughs and Needs	Loews	Commonwealth B
Tuesday	8:30 AM	193a	An International Assessment of Research in Catalysis by Nanostructured Materials	PNCC	Room 103-B
Tuesday	8:30 AM	218e	Breakdown Mechanisms for Methyl-Esters	Marriott	Salon D
Tuesday	8:30 AM	197b	Computational Analysis of Yeast Xylose Metabolism	PNCC	Room 307-B
Tuesday	8:30 AM	202e	Conversion of Microalgae to Biodiesel at Supercritical Conditions	PNCC	Room 113-B
Tuesday	8:30 AM	202a	Growing Lipid-Rich Microalgae In Wastewater for Biodiesel Production	PNCC	Room 113-B
Tuesday	8:30 AM	219a	Innovative Autothermal Reforming Using Hydrogen Peroxide as Oxidant for Portable Fuel Cells	PNCC	Room 113-C
Tuesday	8:30 AM	251e	Multiplex Recombineering: Progress toward the Multigenic Insertion of Regulatory Elements and Potential Applications In Metabolic Engineering	Loews	Washington C Room
Tuesday	8:30 AM	200b	Process Intensification In Continuous Base-Catalyzed Biodiesel Production	Loews	Commonwealth D
Tuesday	8:30 AM	202f	Production of Biodiesel from Microalgae	PNCC	Room 113-B
Tuesday	8:30 AM	202b	Seaing Green	PNCC	Room 113-B
Tuesday	8:30 AM	202c	Simulation of Algal Growth In a Photobioreactor	PNCC	Room 113-B
Tuesday	8:30 AM	199c	The Spectroscopic Signature Nitrogen-Substituted Zeolites	PNCC	Room 201-C
Tuesday	12:30 PM	260e	Effect of Cooling Rate on Oleic and Linoleic Acid Crystal Compositions	Marriott	Franklin 5
Tuesday	12:30 PM	267a	Impacts of New Technologies and Policies on Biofuels Production and Trade	PNCC	Room 113-B
Tuesday	12:30 PM	290e	Membrane Aided Reclamation of Waste Chemical Streams	PNCC	Room 106-A
Tuesday	12:30 PM	267d	Novel Algal Photobioreactor Design and Operation for the Biofuels Industry	PNCC	Room 113-B
Tuesday	12:30 PM	267f	Oleaginous Microorganisms Utilizing Glycerol as Sole Carbon Source for the Production of Lipids for Biofuels	PNCC	Room 113-B
Tuesday	12:30 PM	316b	Supercritical Production of Biodiesel Using Methanol and Ethanol In Batch and Continuous Reactors	PNCC	Room 204-C
Tuesday	3:15 PM	330b	Accelerating Sample Preparation in the Biofuel R&D by Automated High Output Technologies	PNCC	Room 113-B
Tuesday	3:15 PM	368b	Development of Solid Waste Landfills	Loews	Lescaze Room
Tuesday	3:15 PM	335e	Mixed Metaloxide Supported CeO ₂ Catalysts for the Transesterification of Soybean Oil with Methanol	PNCC	Room 103-A
Tuesday	3:15 PM	335f	Reaction Kinetics of Soybean Oil Transesterification at High Temperature	PNCC	Room 103-A
Tuesday	3:15 PM	368a	Where Does It Go? a History of Solid Waste Disposal, Flow Control and Recycling	Loews	Lescaze Room
Wednesday	8:30 AM	394g	Biodiesel Process and Control	PNCC	Room 103-B
Wednesday	8:30 AM	395c	New Biobased Materials from Co-Products	PNCC	Room 204-A
Wednesday	8:30 AM	449c	Principles of Sustainable Energy Course at Ohio State University	Loews	Lescaze Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday 8:30 AM	394c	Process Development to Reduce Minor Component Content In Biodiesel	PNCC	Room 103-B
Wednesday 8:30 AM	438c	Process and Economic Simulation of Wastewater Plants for Lipid Feedstock Production through Use of Superpro Designer	Loews	Washington A Room
Wednesday 8:30 AM	394a	Simulation and Optimization of the Process Used in Colombia for the Production of Biodiesel from Palm Oil	PNCC	Room 103-B
Wednesday 8:30 AM	394d	Study of Antioxidants on the Oxidative Stability of Biodiesel	PNCC	Room 103-B
Wednesday 8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday 8:30 AM	394h	The Future of Biodiesel as a Viable Alternative Fuel: Challenges and Opportunities	PNCC	Room 103-B
Wednesday 12:30 PM	458b	A Process Integration Approach to Strategic Design and Scheduling of Multi-Feedstock Biodiesel Plants	PNCC	Room 201-B
Wednesday 12:30 PM	459b	Biobased Plastic Derived from Cereal Proteins	PNCC	Room 204-A
Wednesday 12:30 PM	479a	Bioenergy Development through University Research Centers	Loews	The Terrace Room
Wednesday 12:30 PM	502a	Comparative Study of Transesterification of Refined Oil Using a Batch Reactor Versus a High Shear Mixer Pilot Scale Reactor	Loews	Washington A Room
Wednesday 12:30 PM	454a	Renewable Energy Technologies: A Veritable Tool for Empowering Rural Women	Marriott	Salon B
Wednesday 12:30 PM	460e	Understanding and Harnessing the Microbial Fermentation of Glycerol. A New Path for the Production of Biochemicals	PNCC	Room 202-B
Wednesday 3:15 PM	563f	A Parametric Study of Reactive Extraction of Rapeseed Biodiesel	Loews	Lescaze Room
Wednesday 3:15 PM	563e	Biodiesel from Waste or Unrefined Oils Using Calcium-Based Catalysts	Loews	Lescaze Room
Wednesday 3:15 PM	563a	Catalyst Performance of the Ion-Exchange Resin In the Continuous Production Process of Biodiesel Fuel	Loews	Lescaze Room
Wednesday 3:15 PM	556d	Hydrolytic Degradation Studies of Renewable Copolymers	PNCC	Room 103-C
Wednesday 3:15 PM	542c	Life Cycle Analysis of Alternatives for Diesel: An Assessment of Inputs, Study Assumptions and Feedstock Type	PNCC	Room 202-B
Wednesday 3:15 PM	542f	Life Cycle Assessment of Renewable Transportation Fuel Feedstocks	PNCC	Room 202-B
Wednesday 6:00 PM	573af	Biogas to Syngas Catalysis-Renewable Process for Fischer-Tropsch Liquid Fuels	PNCC	Exhibit Hall A
Wednesday 6:00 PM	577u	Industrial Biosystems Engineering: Application of Systems Engineering In Biorefinery Systems	PNCC	Exhibit Hall A
Wednesday 6:00 PM	575s	Influence of Reactor Configuration on the Selective Oxidation of Glycerol Over Supported Au Catalysts	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573w	Kinetics of Uncatalyzed Ethyl Esterification of Oleic Acid	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573u	Stochastic Modeling of the Biodiesel Production Process	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573ad	Sustainable Fuel for the Brazilian Transportation Sector	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573v	Synthesis and Analysis of a Flexible Multi-Feedstock Biodiesel Production Process	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573s	The Enzymatic Conversion of Glycerol to Glycerol Carbonate	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573r	The Heterogeneous Catalyst System for the Conversion of Free Fatty Acid In Used Vegetable Oils for the Conventional Production of Biodiesel	PNCC	Exhibit Hall A
Wednesday 6:00 PM	573t	Two-Phase Flow Behaviors In Microtube Reactors during Biodiesel Production	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	8:30 AM	583g	Catalytic Deoxygenation of Stearic and Oleic Acids Over Pd/C	PNCC	Room 113-A
Thursday	8:30 AM	583c	Comparative Analysis of Biodiesel Production from Waste Cooking Oil Using Ferric Sulfate and Sulfuric Acid	PNCC	Room 113-A
Thursday	8:30 AM	586c	Developing and Integrating Sustainable Chemical Processes into Existing Petro-Chemical Plant Complexes	Marriott	Room 502
Thursday	8:30 AM	584a	Investigating Adsorbate Structures of Cyclic C4 Oxygenates from Biomass on Catalytic Metal Surfaces Using Spectroscopic Techniques	PNCC	Room 202-B
Thursday	8:30 AM	592d	Mixed-Integer Bi-Objective Optimization Algorithm for Solving Energy Supply Chain Problems	PNCC	Room 201-B
Thursday	8:30 AM	583b	Oligomerization of Propionaldehyde on Novel Basic Catalysts	PNCC	Room 113-A
Thursday	12:30 PM	636d	Catalytic Oxidation of Glycerol to High-Value Chemicals	PNCC	Room 202-B
Thursday	12:30 PM	639e	Conversion of Lignocellulosic Sugars to Triacylglycerols: A Renewable Diesel Feedstock	PNCC	Room 203-A
Thursday	12:30 PM	634e	Millisecond Autothermal Catalytic Partial Oxidation of Glycerol to Syngas and Chemicals	PNCC	Room 113-A
Thursday	12:30 PM	663e	Sustainable Biodiesel Production. A Tool for Assessing and Improving the Sustainability of a Biodiesel Production Process	Marriott	Room 502
Thursday	12:30 PM	660b	Synthesis of Biodiesel Via Cavitation-Enhanced Homogeneous and Solid Acid Catalyzed Processes	PNCC	Room 102-B
Thursday	3:15 PM	692g	Development of a Vanadium Oxides Loading Method on Solid Supports	PNCC	Room 102-B
Thursday	3:15 PM	689a	Novel Reactor Design for the Production of Biodiesel from Free Fatty Acids	PNCC	Room 203-A
Thursday	3:15 PM	689b	Optimization of the Synthesis of Biodiesel Via Ultrasound-Enhanced Homogeneous and Solid Acid Catalyzed Processes Using a Novel Reactor	PNCC	Room 203-A
Thursday	3:15 PM	689d	Production of Green Diesel by Hydrocracking of Canola Oil on Ni-Mo/ γ -Al ₂ O ₃ and Pt-Zeolite Based Catalysts	PNCC	Room 203-A
Thursday	3:15 PM	689c	Renewable Petroleum™ Technology: Production of Fit for Purpose Renewable Fuels	PNCC	Room 203-A
Thursday	3:15 PM	689e	Simultaneous Transesterification and Esterification to Biodiesel Using Zinc-Based Catalyst	PNCC	Room 203-A
Thursday	6:00 PM	722am	Development and Characterization of Copolymers from Renewable Resource Monomers	PNCC	Exhibit Hall A
Thursday	6:00 PM	722ap	Palm Oil Based Epoxides as Pvc Plasticizers: Synthesis, Characterization and Incorporation and Their Thermomechanical and Chemical Properties	PNCC	Exhibit Hall A
Friday	8:00 AM	728f	Designing the Optimal Supply Chain for Biodiesel Production in Spain	PNCC	Room 203-B
Friday	8:00 AM	725a	Simulation of Pulp Mill Black Liquor Gasification with Gibbs Free Energy Minimization Approach	Loews	Lescaze Room
Friday	8:00 AM	738f	The Effects of Substitution and Degree of Polymerization on the Pka Values of Polymeric Polystyrene Sulfonic Acids	PNCC	Room 103-C
Friday	10:45 AM	765c	Predicting Translation Initiation Rate from RNA Sequence	PNCC	Room 113-C
Friday	10:45 AM	751f	Study of a Two- Stage Culture of Docosahexaenoic Acid Producing Marine Algae Schizochytrium Limacinum SR21 with Shifting Dissolved Oxygen Level	PNCC	Room 103-C
Friday	10:45 AM	753e	Wastewater Treatment Systems: The Next Biorefinery	PNCC	Room 203-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



FUEL CELLS					
Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5by	Chemical Energy Conversion: Molecular Approach towards the Discovery of Efficient and Environmentally Friendly Heterogeneous Catalysts and Electro-Catalysts	PNCC	Exhibit Hall A
Sunday	1:00 PM	5cn	Green Nanotechnology, Engineering and Synthesis for Energy, Biomedical and Environmental Applications	PNCC	Exhibit Hall A
Sunday	1:00 PM	5e	Polymer Thin Film Nanoassemblies for Electrochemical Energy Conversion Devices	PNCC	Exhibit Hall A
Sunday	1:00 PM	5cv	Preparation of Heterogeneous Nanostructures for Catalytic and Magnetic Applications	PNCC	Exhibit Hall A
Sunday	1:00 PM	5bw	Rational Design of Catalysts for Energy through Fundamental Research	PNCC	Exhibit Hall A
Monday	8:30 AM	26a	Diffusion, Mass Uptake, and Free Volume Behavior of Polymer Thin and Ultra-Thin Films	PNCC	Room 107-B
Monday	8:30 AM	23a	Electrospun Mats Modified by Layer-by-Layer Assembly for Use as Proton Exchange Membranes	PNCC	Room 202-A
Monday	8:30 AM	45a	Morphological Dependence of ZnO on Methanol Steam Reforming Activity in Pd/ZnO Catalysts	Marriott	Franklin 10
Monday	8:30 AM	33e	Novel Proton Conducting Ceramic Thin Films for Intermediate Temperature Hydrogen Membrane Fuel Cells	PNCC	Room 102-A
Monday	8:30 AM	33f	Optimization of Cathode Layer for Polymer Electrolyte Fuel Cells	PNCC	Room 102-A
Monday	8:30 AM	33g	Planar Model for the Cathode Catalyst Layer In a Polymer Electrolyte Membrane Fuel Cell	PNCC	Room 102-A
Monday	8:30 AM	45d	TiO ₂ Nanotubes Supported Gold Photoanodes for Photoelectrochemical Hydrogen Production	Marriott	Franklin 10
Monday	12:30 PM	69a	Complete Microbiological Fuel Cell. A Photosynthetic Cathode Coupled to a Fermentative Anode	PNCC	Room 106-B
Monday	12:30 PM	117b	Effect of Calcium and Sodium Deposition on a Pemfc	PNCC	Exhibit Hall A
Monday	12:30 PM	81e	Non-Fickian Diffusion of Water In Nafion	PNCC	Room 107-B
Monday	12:30 PM	63d	Thermodynamic Analysis of Adsorption Enhanced Reforming Processes	Marriott	Salon I
Monday	3:00 PM	130a	Pt-Based Necklace and Other Low-Dimensional Nanostructures	PNCC	Room 303-A
Monday	3:15 PM	154b	Perspectives on the Past, Present and Future Advances In Computational Chemistry and Their Application to Catalysis	PNCC	Room 204-B
Monday	3:15 PM	153a	Towards Computational Screening for New Catalysts	PNCC	Room 102-A
Monday	6:00 PM	190c	Factorial Design of Thermally Conductive Composite Materials for Fuel Cell Bipolar Plate Applications	PNCC	Exhibit Hall A
Monday	6:00 PM	188y	Synthesis and Characterization of Protogenic Liquid Crystals	PNCC	Exhibit Hall A
Tuesday	8:30 AM	219f	A Hybrid-Silicon Miniature Hydrogen Fuel Cell for Portable Power Generation	PNCC	Room 113-C
Tuesday	8:30 AM	238c	Adsorption on Molecularly Rough Surfaces	Marriott	Salon I
Tuesday	8:30 AM	193a	An International Assessment of Research in Catalysis by Nanostructured Materials	PNCC	Room 103-B
Tuesday	8:30 AM	250b	Highly Conductive Ionic Liquid-Homopolymer Mixtures	Marriott	Room 414/415
Tuesday	8:30 AM	219e	Improved Thermal Management of H ₂ O ₂ Decomposition for a Compact SOFC Oxidant Source	PNCC	Room 113-C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	8:30 AM	226c	Industrial Application of Cpfd to Biomass Gasification	Marriott	Franklin 2
Tuesday	8:30 AM	219a	Innovative Autothermal Reforming Using Hydrogen Peroxide as Oxidant for Portable Fuel Cells	PNCC	Room 113-C
Tuesday	8:30 AM	209b	Kinetic and Process Study for Ethanol Reforming Using a Pt/Rh Washcoated Monolith Catalyst	PNCC	Room 103-A
Tuesday	8:30 AM	219b	Microplasma Reforming of Hydrocarbons	PNCC	Room 113-C
Tuesday	8:30 AM	251e	Multiplex Recombineering: Progress toward the Multigenic Insertion of Regulatory Elements and Potential Applications In Metabolic Engineering	Loews	Washington C Room
Tuesday	8:30 AM	229e	New Methods for Hydrogen Generation from Boron Compounds and Water	PNCC	Room 111-B
Tuesday	8:30 AM	209f	Preparation of Magnetic Cobalt-Based Catalyst for Hydrogen Generation from Alkaline NaBH ₄ Solution	PNCC	Room 103-A
Tuesday	12:30 PM	259a	40 Years of Surface Science at Stanford: A Kinetic Perspective	Loews	Commonwealth B
Tuesday	12:30 PM	286a	Design and Characterization of a Vapor Feed Methanol Fuel Cell with a Flowing Electrolyte	PNCC	Room 113-C
Tuesday	12:30 PM	311c	Hydrogen Adsorption Properties and Structural Stability of Metal-Organic Framework (MOF)-177	Marriott	Salon I
Tuesday	12:30 PM	286e	Sequential Flow Membraneless Microfluidic Fuel Cells with Porous Electrodes	PNCC	Room 113-C
Tuesday	3:15 PM	370a	An Analysis of the Deposition Mechanisms Involved during Self-Limiting Growth of Metal Oxides by Pulsed PECVD	PNCC	Room 202-B
Tuesday	3:15 PM	344d	Co-Adsorption and Electrode-Electrolyte Interfacial Structure Effects on Oxygen Dissociation and Reduction Energetics	PNCC	Room 103-B
Tuesday	3:15 PM	344c	First Principles Studies of Electrochemical Reactions at Solid Oxide Fuel Cell (SOFC) Electrodes	PNCC	Room 103-B
Tuesday	3:15 PM	346a	Fuel Cell Systems: An Introduction for the Chemical Engineer	PNCC	Room 113-C
Tuesday	3:15 PM	377b	Methanol Oxidation Mechanisms by Methanol Dehydrogenase Enzyme: A DMOL3 Study	PNCC	Room 102-B
Tuesday	3:15 PM	344e	Reactivity Descriptors for Improving Direct Methanol Fuel Cell Anode Catalysis	PNCC	Room 103-B
Tuesday	3:15 PM	344b	Stability and Dissolution of Monolayer 3d-Pt Bimetallic Electrocatalyst Surfaces	PNCC	Room 103-B
Wednesday	8:30 AM	420a	Design and Assembly of Anisotropic Particles: The Shapes of Things to Come (With a Little Help from Computer Simulation)	PNCC	Room 201-A
Wednesday	8:30 AM	426g	Glassy Dynamics of Confined Fluids	Marriott	Salon I
Wednesday	8:30 AM	423b	Harnessing Chemical Energy for Hydrogen Purification In Microreactors	PNCC	Room 303-B
Wednesday	8:30 AM	413a	Layer-by-Layer Assembled Proton Exchange Membranes for Fuel Cell Applications	Loews	Congress A Room
Wednesday	8:30 AM	413f	Molecular Dynamics Simulations of Nanoscale Hydrophilic Domain Structure In Hydrated Nafion	Loews	Congress A Room
Wednesday	8:30 AM	413b	PEM Fuel Cell Properties of Pre-Stretched Recast Nafion®	Loews	Congress A Room
Wednesday	8:30 AM	442e	Preparation of Supported Nanoparticle Catalysts. A Molecularly-Engineered Route Based on Synthesis, Assembly and Activation	PNCC	Room 102-B
Wednesday	8:30 AM	449c	Principles of Sustainable Energy Course at Ohio State University	Loews	Lescaze Room
Wednesday	8:30 AM	442d	Reverse Micelle Synthesis of Bimetallic Catalysts	PNCC	Room 102-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	8:30 AM	413e	The Effect of Polymer Structure and Morphology on Proton Hydration and Diffusion In Perfluorosulfonic Acid Membranes Via Molecular Dynamics Simulations	Loews	Congress A Room
Wednesday	8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday	12:30 PM	469d	A First Principles Study of the Poisoning Effects of Sulfur on Pt3Co(111)	Marriott	Room 401/402
Wednesday	12:30 PM	457i	Density Functional Theory Studies on a Reversible Hydrogen Storage "Li-Mg-B-N-H" System	PNCC	Room 103-B
Wednesday	12:30 PM	505a	Low-Cost H ₂ Production for Fuel Cells Using Adsorption Enhanced Reforming	Marriott	Salon K
Wednesday	12:30 PM	483c	New Combustion-Based Methods for Hydrogen Generation	PNCC	Room 103-A
Wednesday	3:15 PM	538c	3-D Modeling of a Proton Exchange Membrane Fuel Cell with Anisotropic Material Properties	PNCC	Room 113-C
Wednesday	3:15 PM	538g	A Numerical Investigation on the Flow, Thermal and Electrical Coupling In a Pemfc Stack	PNCC	Room 113-C
Wednesday	3:15 PM	548a	Concentration-Specific Hydrogen Sensing Behaviour In Monosized Pd Nanoparticle-Based Thin Films	Marriott	Franklin 2
Wednesday	3:15 PM	529e	First Principle Calculations of Supported Catalysts: CO Binding on MgO Supported Gold Clusters and Nanoparticles	Marriott	Room 401/402
Wednesday	3:15 PM	543d	Hydrogen Membrane Fuel Cells with Nanoengineered Proton-Conducting Layer	Loews	Congress A Room
Wednesday	3:15 PM	543e	Steam Reforming of Ethanol (SRE) In a Palladium Based Membrane Reactor Over Nickel Catalyst	Loews	Congress A Room
Wednesday	3:15 PM	538a	Water Problems In PEM Fuel Cells	PNCC	Room 113-C
Wednesday	6:00 PM	575aw	A Kinetic and Process Study for Ethanol Reforming Using a Pt/Rh Washcoated Monolith Catalyst	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ak	Electrochemistry from First Principles: Studies of Electrochemical Transformations at Model Solid Oxide Fuel Cell (SOFC) Anodes	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578s	Experimental Studies and Optimal Design for a Small-Scale Autonomous Power System Based on Methanol Reforming and a PEM Fuel Cell	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573k	Fractionation and Optimization of Switchgrass Pretreatment Via Cellulose-Solvent-Based Lignocellulose Fractionation (CSLF) at Lower Cellulase Loadings	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575e	Hydrogen Generation from Hydrolysis of Sodium Borohydride Using Ni/polymer Nanocomposites as Catalysts	PNCC	Exhibit Hall A
Wednesday	6:00 PM	571a	Protocols for the Identification of Membrane Protein Interaction Networks	PNCC	Exhibit Hall A
Thursday	8:30 AM	588h	A Resource Sharing Approach to Nanotechnology Education: The PA Nanotechnology Partnership	PNCC	Room 104-B
Thursday	8:30 AM	589d	Alloyed and Intermetallic Platinum-Based Nanomaterials as Fuel Cell Catalysts	PNCC	Room 303-B
Thursday	8:30 AM	600b	Hydrothermolysis of Ammonia Borane. A Novel Method to Generate Hydrogen for Fuel Cells	PNCC	Room 103-C
Thursday	8:30 AM	589c	Layered Carbon Nanostructures for Fuel Cell Electrocatalyst Applications	PNCC	Room 303-B
Thursday	8:30 AM	592h	Modeling and Optimization of Polymer Electrolyte Fuel Cells	PNCC	Room 201-B
Thursday	8:30 AM	588e	Teaching Nanoscale Science and Engineering to Chemical Engineers at Georgia Tech	PNCC	Room 104-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	12:30 PM	642b	A First Principles Study of Direct Electrooxidation of Aqueous Borohydride on Au and Pt Surfaces	PNCC	Room 303-B
Thursday	12:30 PM	648c	An Efficient Approach to the Management of Liquid Water In PEM Fuel Cells	PNCC	Room 111-B
Thursday	12:30 PM	648b	An Oxide Ion and Proton Co-Ion Conducting Electrolyte for Intermediate-Temperature Fuel Cells	PNCC	Room 111-B
Thursday	12:30 PM	647e	Improved Performance of Composite Proton Conducting Membranes In Fuel Cells through Electric Field Control of Membrane Structure	Loews	Congress A Room
Thursday	12:30 PM	668d	Improving Long-Term Stability of SOFC Anodes: First Principles Approaches toward Carbon-Tolerant Alloy Electrocatalysts	Marriott	Room 309/310
Thursday	12:30 PM	648d	Magnetic Resonance Imaging as a Diagnostic Tool for Fuel Cell Water Management	PNCC	Room 111-B
Thursday	12:30 PM	634e	Millisecond Autothermal Catalytic Partial Oxidation of Glycerol to Syngas and Chemicals	PNCC	Room 113-A
Thursday	12:30 PM	647c	Nanofiber Network Membranes for Fuel Cell Applications	Loews	Congress A Room
Thursday	12:30 PM	648f	Ni/mh Based Fuel Cell/battery (FCB) Hybrid System	PNCC	Room 111-B
Thursday	12:30 PM	668a	Optimal Design of Catalysts Via Multiscale Modeling: Application to Hydrogen Production Reactions	Marriott	Room 309/310
Thursday	12:30 PM	647f	Polyelectrolyte Multilayers for Direct-Methanol Fuel Cells	Loews	Congress A Room
Thursday	12:30 PM	642d	Pt-Decorated Electrocatalysts for Direct Alcohol Fuel Cells	PNCC	Room 303-B
Thursday	12:30 PM	633c	Synthesis of, Characterization of and Catalytic SWNT Synthesis on Pt-Co-Mcm-41	PNCC	Room 102-A
Thursday	12:30 PM	646e	The Nature of Proton Conduction in a Polymer Electrolyte Membrane, Nafion	PNCC	Room 106-B
Thursday	3:15 PM	708d	A Comparative Study of Tungsten Monocarbide and Platinum as Counter Electrode Materials In Photoelectrochemical Solar Cells	Marriott	Room 309/310
Thursday	3:15 PM	694c	Economical Analysis of Ethanol Steam Reformer for Hydrogen Production Associated with a Sugarcane Industry	Loews	Howe Room
Thursday	3:15 PM	708b	Improved Operation of the Direct Formic Acid Fuel Cell by the Use of Electrochemically Modified Anode Catalysts	Marriott	Room 309/310
Thursday	3:15 PM	690a	Microct X-Ray Imaging of Water Movement In a PEM Fuel Cell	PNCC	Room 111-B
Thursday	3:15 PM	708e	Synthesis and Electrocatalytic Property of Platinum-Based Heteronanostructures	Marriott	Room 309/310
Thursday	3:15 PM	695d	Synthesis and Modification of Sodalite (SOD) and Deca-Dodecahil 3R (DDR) Membranes Grown on Alpha-Alumina Supports	Loews	Washington B Room
Thursday	6:00 PM	722au	Diffusion of Water and Methanol In Nafion: In Situ Infrared Experiments and Multicomponent Models	PNCC	Exhibit Hall A
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Thursday	6:00 PM	722ar	Nafion-Based Anion Exchange Membranes for the Alkaline Fuel Cell	PNCC	Exhibit Hall A
Friday	8:00 AM	740c	Combinatorial Screening of Carbon Supported Pt Based Binary and Ternary Systems as Electrocatalysts for Oxygen Evolution	PNCC	Room 102-A
Friday	8:00 AM	735e	Identification and Comparison of Internal Resistances In a Proton-Exchange Membrane Fuel Cell and a Microbial Fuel Cell Using Electrochemical Impedance Spectroscopy	PNCC	Room 109-B
Friday	8:00 AM	738f	The Effects of Substitution and Degree of Polymerization on the Pka Values of Polymeric Polystyrene Sulfonic Acids	PNCC	Room 103-C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Friday	8:00 AM	735d	Water Management in PEM Fuel Cells	PNCC	Room 109-B
Friday	10:45 AM	768a	Effect of Hydrophobic Polymer Treatments on the Capillary Properties of Gas Diffusion Layers	PNCC	Room 111-B
Friday	10:45 AM	767a	Electrochemical Hydrogenation of Soybean Oil Using Transition Metal Carbide Based Electrocatalysts	PNCC	Room 201-A
Friday	10:45 AM	768f	Evidence for Hydrogen Spillover at Extremely Low Pressure for Pt- and Pd- Supported on Carbon Materials	PNCC	Room 111-B

OTHER FUELS DERIVED FROM RENEWABLE RESOURCES

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5aq	Biological Production of Renewable Energies from Waste Materials	PNCC	Exhibit Hall A
Sunday	1:00 PM	5j	Homogeneous and Heterogeneous Acid Catalysis of Lipids to Produce Green Fuels: Advancing Biofuels In a Fossil Fuel World	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ae	Supercritical and Expanded Solvent Systems for the Sustainable Utilization of Biomass Feedstocks	PNCC	Exhibit Hall A
Monday	8:30 AM	14a	Biobutanol Production Via Fermentation of Hot-Water Wood Extract Sugars	PNCC	Room 106-B
Monday	8:30 AM	51c	Finding Needles In Haystacks: Functional Genomics and Extremophile Biotechnology	Loews	Washington C Room
Monday	8:30 AM	29b	Nanostructured Catalysts for CO ₂ Hydrogenation to Higher Hydrocarbons	PNCC	Room 103-A
Monday	12:30 PM	96e	Advances toward Obtaining Kinetics from Reactive Molecular Dynamics	PNCC	Room 102-A
Monday	12:30 PM	66a	Biobutanol from Yeast. A Synergistic Genome and Protein Engineering Approach	PNCC	Room 113-C
Monday	12:30 PM	102c	Dehydrogenation Thermodynamics of Hydrogen Storage Material Manganese Borohydride: First-Principles Study	Marriott	Franklin 10
Monday	12:30 PM	81a	Selective Membrane Separations for Ammonia	PNCC	Room 107-B
Monday	3:15 PM	184f	Growth of High Surface Area Titanium Carbide Films	Loews	Commonwealth D
Monday	3:15 PM	146e	Production of Butanol from Biodiesel Derived Crude Glycerol Using Pure Cultures of <i>C. Pasteurianum</i> (ATCC 6013)	PNCC	Room 106-B
Monday	3:15 PM	175a	Synthetic Membrane Filtration: Breakthroughs and Needs	Loews	Commonwealth B
Monday	3:15 PM	153a	Towards Computational Screening for New Catalysts	PNCC	Room 102-A
Monday	6:00 PM	189c	Characterization of Nano-Sized Ni/Ce(x)Zr(1-x)O ₂ Catalyst for Autothermal Reforming	PNCC	Exhibit Hall A
Tuesday	8:30 AM	202d	Algae-Based Hydrocarbon Production	PNCC	Room 113-B
Tuesday	8:30 AM	246e	Composite Membranes with Ultra-Thin Polymeric Interpenetration Network and Enhanced Separation Performance Approaching Ceramic Membranes for Biofuel	Loews	Washington B Room
Tuesday	8:30 AM	201d	Hydrogen Production by Sulfur-Iodine Thermochemical Cycle: Experimental Tests on Hydriodic Section Concerning Iodine Purification System	Loews	Howe Room
Tuesday	8:30 AM	226c	Industrial Application of Cpfd to Biomass Gasification	Marriott	Franklin 2
Tuesday	8:30 AM	246a	Membrane Separation Techniques in the Continuous Fermentation and Separation of Butanol: Possible Applications of a Two-Step Process in a Biorefinery	Loews	Washington B Room
Tuesday	8:30 AM	251e	Multiplex Recombineering: Progress toward the Multigenic Insertion of Regulatory Elements and Potential Applications In Metabolic Engineering	Loews	Washington C Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	8:30 AM	199c	The Spectroscopic Signature Nitrogen-Substituted Zeolites	PNCC	Room 201-C
Tuesday	12:30 PM	291c	DuPont: Building on the Past towards a Sustainable Future	Loews	Washington C Room
Tuesday	12:30 PM	267a	Impacts of New Technologies and Policies on Biofuels Production and Trade	PNCC	Room 113-B
Tuesday	12:30 PM	267c	Results and Considerations of a Statistically Designed Experiment for the Production of Bio-Oil from a Lab-Scale Free Fall Pyrolyzer	PNCC	Room 113-B
Tuesday	12:30 PM	320a	Storage of Hydrogen as Clathrate Hydrate: Phase Equilibria, Thermodynamics and Kinetics	PNCC	Room 103-C
Tuesday	12:30 PM	291f	The Challenges of Diminishing Natural Capital in the Transition to a Bio-Based Industry	Loews	Washington C Room
Tuesday	3:15 PM	380d	Establishing Sustainable Society through Local Processing within Biomass Communities and Material Recycle with Carbon Dioxide and Water	Loews	The Terrace Room
Tuesday	3:15 PM	341a	Reducing the Energy Demand of Bio-Ethanol through Salt-Extractive Distillation and Electrodialysis	Marriott	Franklin 4
Tuesday	3:15 PM	330c	Windfuels – Competitive Transportation Fuels from Wind Energy and Waste CO ₂	PNCC	Room 113-B
Wednesday	8:30 AM	438a	Conceptual Design of Biobutanol Production Processes	Loews	Washington A Room
Wednesday	8:30 AM	416b	Metabolic Network Reconstruction and Analysis of Butanol Producing Strain Clostridium Beijerinckii	Loews	Washington C Room
Wednesday	8:30 AM	438c	Process and Economic Simulation of Wastewater Plants for Lipid Feedstock Production through Use of Superpro Designer	Loews	Washington A Room
Wednesday	12:30 PM	479a	Bioenergy Development through University Research Centers	Loews	The Terrace Room
Wednesday	12:30 PM	482b	Computational Identification of Small RNAs In Clostridium Acetobutylicum and Prediction of mRNA Targets	Loews	Washington C Room
Wednesday	12:30 PM	511f	Development of Feedstock Quality Specifications for Optimizing Biofuels Conversion Processes	PNCC	Room 202-A
Wednesday	12:30 PM	483d	How to Find What You Do Not Know When You Do Not Even Know What to Look for	PNCC	Room 103-A
Wednesday	12:30 PM	512d	Photosynthetic Biohydrogen: A Case Study Integrating Sustainability into the Student Design Experience	Loews	Lescaze Room
Wednesday	3:15 PM	543d	Hydrogen Membrane Fuel Cells with Nanoengineered Proton-Conducting Layer	Loews	Congress A Room
Wednesday	3:15 PM	542a	Life Cycle Assessment of Tallow-Based Renewable Diesel Fuel	PNCC	Room 202-B
Wednesday	6:00 PM	573af	Biogas to Syngas Catalysis-Renewable Process for Fischer-Tropsch Liquid Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ae	Biorefinery Product Allocation Using a Flexible Optimization Framework	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577t	Environmental Evaluation of Cogeneration Scenarios In Sugar Industry	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573f	Equilibrium Adsorption Characteristics of Polysaccharide Adsorbents	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578s	Experimental Studies and Optimal Design for a Small-Scale Autonomous Power System Based on Methanol Reforming and a PEM Fuel Cell	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578af	Gtl(Gas to Liquids) Process Optimization Simulation Study	PNCC	Exhibit Hall A
Wednesday	6:00 PM	571bj	Hydrocarbon Production In Algae	PNCC	Exhibit Hall A
Wednesday	6:00 PM	571bm	Metabolic Engineering of N-Butanol Production in Bacteria	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	6:00 PM	573aa	Optimal Allocation of Carbon Resources In An Integrated Biorefinery	PNCC	Exhibit Hall A
Thursday	8:30 AM	583g	Catalytic Deoxygenation of Stearic and Oleic Acids Over Pd/C	PNCC	Room 113-A
Thursday	8:30 AM	586c	Developing and Integrating Sustainable Chemical Processes into Existing Petro-Chemical Plant Complexes	Marriott	Room 502
Thursday	8:30 AM	604c	Direct Contact Membrane Distillation: Studies on Novel Hollow Fiber Membranes, Devices, Countercurrent Cascades and Scaling	Loews	Congress A Room
Thursday	8:30 AM	600f	Hydrogen Quantum States, Dynamics, and Nanoconfined Melting In Potassium Intercalated Graphite	PNCC	Room 103-C
Thursday	8:30 AM	620f	Improving Complex Phenotypes by Mutagenesis of the Bacterial RNA-Polymerase Holoenzyme: New Approaches for Transcriptional Engineering	PNCC	Room 307-B
Thursday	8:30 AM	620e	Knockout of Transcriptional Regulators for Decoupling Solvent Formation from Sporulation In Clostridium Acetobutylicum	PNCC	Room 307-B
Thursday	8:30 AM	620a	Model-Guided Design of a Refactored Metabolic Pathway	PNCC	Room 307-B
Thursday	8:30 AM	600e	New Material Li-Mn-B-H System as Hydrogen Storage Candidate	PNCC	Room 103-C
Thursday	8:30 AM	582f	Syngas Conversion to Gasoline Over Fe/zsm-5	PNCC	Room 102-A
Thursday	12:30 PM	635d	Biomass Gasification for Hydrogen Production	Loews	Howe Room
Thursday	12:30 PM	633f	Fischer-Tropsch Synthesis Over Mo/zeolite Catalysts	PNCC	Room 102-A
Thursday	12:30 PM	664a	High Yield Biorefining Using Organosolv Processing	PNCC	Room 202-A
Thursday	12:30 PM	635c	Large Scale Hydrogen Production Using Solar Energy — Status, Challenges, and Plans	Loews	Howe Room
Thursday	12:30 PM	636c	Product Distribution for Heterogeneous Catalytic Cracking of Acylglycerides on Commercial Catalysts	PNCC	Room 202-B
Thursday	3:15 PM	696d	Design of In Situ Product Recovery Devices Using Polymeric Resins	PNCC	Room 202-A
Thursday	3:15 PM	689f	Identification of Metals Found In Biofuel Lipids Using Inductively Coupled Plasma/mass Spectrometry	PNCC	Room 203-A
Thursday	3:15 PM	689c	Renewable Petroleum™ Technology: Production of Fit for Purpose Renewable Fuels	PNCC	Room 203-A
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Friday	8:00 AM	743d	Hydrothermal Biomass Chemistry: Protein-Carbohydrate Interactions	PNCC	Room 202-A
Friday	8:00 AM	748a	Model of Transient Hydrogen Permeation In Metal and Metal Composite Membranes	PNCC	Room 203-A
Friday	8:00 AM	725a	Simulation of Pulp Mill Black Liquor Gasification with Gibbs Free Energy Minimization Approach	Loews	Lescaze Room
Friday	8:00 AM	727e	Studies on the C-Number Distribution Controlled by Co-Fed α -Olefin in Fischer-Tropsch Synthesis with the Trickle Bed Reactor	PNCC	Room 104-B
Friday	10:45 AM	753a	Biofuel Generation from Cheese Whey In a Two –Stage Anaerobic Process	PNCC	Room 203-A
Friday	10:45 AM	757d	Hydrogenations of Biomass-Related Substrates In Supercritical Media	PNCC	Room 202-A
Friday	10:45 AM	758e	Low Temperature Methanol Synthesis from CO Hydrogenation Over Cu-Based Catalyst	PNCC	Room 104-B
Friday	10:45 AM	765c	Predicting Translation Initiation Rate from RNA Sequence	PNCC	Room 113-C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



ENERGY EFFICIENCY

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5aq	Biological Production of Renewable Energies from Waste Materials	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ae	Supercritical and Expanded Solvent Systems for the Sustainable Utilization of Biomass Feedstocks	PNCC	Exhibit Hall A
Monday	8:30 AM	26a	Diffusion, Mass Uptake, and Free Volume Behavior of Polymer Thin and Ultra-Thin Films	PNCC	Room 107-B
Monday	12:30 PM	102f	Computational Study of Electrical Energy Storage In Supercapacitors Based on Carbon Nanotube Forests	Marriott	Franklin 10
Monday	12:30 PM	118a	Preliminary Design of Bioethanol Process Plants	PNCC	Exhibit Hall A
Monday	6:00 PM	190i	Effect of Wall-Water Interaction on Filling and Structure of Water Inside Nanotube	PNCC	Exhibit Hall A
Monday	6:00 PM	185h	First-Principles Theoretical Analysis of Carbon Allotropes and Nanostructures Formed through Exposure of Multi-Walled Carbon Nanotubes to Hydrogen Plasmas	PNCC	Exhibit Hall A
Tuesday	8:30 AM	197b	Computational Analysis of Yeast Xylose Metabolism	PNCC	Room 307-B
Tuesday	8:30 AM	246d	Energy Efficient Hybrid Vapor Stripping-Vapor Permeation Process for Ethanol Recovery and Dehydration	Loews	Washington B Room
Tuesday	8:30 AM	200b	Process Intensification In Continuous Base-Catalyzed Biodiesel Production	Loews	Commonwealth D
Tuesday	12:30 PM	286a	Design and Characterization of a Vapor Feed Methanol Fuel Cell with a Flowing Electrolyte	PNCC	Room 113-C
Tuesday	12:30 PM	279b	Direct Visualization of Rapid Convective Deposition of Microsphere Monolayers	PNCC	Room 204-A
Tuesday	12:30 PM	265c	Improvement of Pyrolysis Model In Black Liquor Gasification	Marriott	Salon D
Tuesday	12:30 PM	291f	The Challenges of Diminishing Natural Capital in the Transition to a Bio-Based Industry	Loews	Washington C Room
Tuesday	12:30 PM	316e	Trans-FREE Hydrogenation of Vegetable Fat in Vapor Phase Supercritical Modified CO ₂	PNCC	Room 204-C
Tuesday	3:15 PM	341a	Reducing the Energy Demand of Bio-Ethanol through Salt-Extractive Distillation and Electrodialysis	Marriott	Franklin 4
Tuesday	3:15 PM	380a	The Elements of Sustainability	Loews	The Terrace Room
Wednesday	8:30 AM	438a	Conceptual Design of Biobutanol Production Processes	Loews	Washington A Room
Wednesday	8:30 AM	395b	Fundamental Design of Bio-Based Materials	PNCC	Room 204-A
Wednesday	8:30 AM	391a	Solar Cadmium Hydrogen Cycle Update	Loews	Howe Room
Wednesday	8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday	12:30 PM	459b	Biobased Plastic Derived from Cereal Proteins	PNCC	Room 204-A
Wednesday	12:30 PM	508f	Characterization of Metal Oxide Electrical Properties for Band Engineered Catalysis	PNCC	Room 102-B
Wednesday	12:30 PM	511f	Development of Feedstock Quality Specifications for Optimizing Biofuels Conversion Processes	PNCC	Room 202-A
Wednesday	12:30 PM	505a	Low-Cost H ₂ Production for Fuel Cells Using Adsorption Enhanced Reforming	Marriott	Salon K

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	12:30 PM	468e	Representation of a Continuous Particle Size Distribution Using a New Polydisperse Kinetic Theory	Loews	Commonwealth B
Wednesday	12:30 PM	511b	Sustainable Strategies for Biofuel Production	PNCC	Room 202-A
Wednesday	3:15 PM	542d	Developing a Sustainable Integrated Corn-Based Biorefinery	PNCC	Room 202-B
Wednesday	6:00 PM	573y	A Simplified Approach to Aspen-Plus® Mass and Energy Balances for Preliminary Process Analysis and Economic Feasibility of Pyrolysis of Switchgrass to Bio-Oil	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573af	Biogas to Syngas Catalysis-Renewable Process for Fischer-Tropsch Liquid Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ae	Biorefinery Product Allocation Using a Flexible Optimization Framework	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577t	Environmental Evaluation of Cogeneration Scenarios In Sugar Industry	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573k	Fractionation and Optimization of Switchgrass Pretreatment Via Cellulose-Solvent-Based Lignocellulose Fractionation (CSLF) at Lower Cellulase Loadings	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573j	Improving the Quality of Corn Stover Biomass through Biological Pretreatment	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573aa	Optimal Allocation of Carbon Resources In An Integrated Biorefinery	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578ae	Optimal Detailed Design for Integral Cooling Water Systems	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ad	Sustainable Fuel for the Brazilian Transportation Sector	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573v	Synthesis and Analysis of a Flexible Multi-Feedstock Biodiesel Production Process	PNCC	Exhibit Hall A
Thursday	8:30 AM	623b	Biomass Gasification in a Stoker Gasifier	PNCC	Room 204-A
Thursday	8:30 AM	586c	Developing and Integrating Sustainable Chemical Processes into Existing Petro-Chemical Plant Complexes	Marriott	Room 502
Thursday	8:30 AM	617a	Process Modeling Results of Various Leading Pretreatment Technologies for Corn Stover and Hybrid Poplar	PNCC	Room 202-A
Thursday	8:30 AM	588e	Teaching Nanoscale Science and Engineering to Chemical Engineers at Georgia Tech	PNCC	Room 104-B
Thursday	12:30 PM	661b	A Comprehensive Study on the Diamino Modification of Polyimides	Loews	Congress B Room
Thursday	12:30 PM	639f	Demonstration of a Viable Hydrogenase Assay for Syngas Fermentation to Ethanol: Quantitative Accounting for Competing Reactions, Enzyme Inhibition, and Diffusion Limitations	PNCC	Room 203-A
Thursday	12:30 PM	664e	Efficient Sugar Release from Common Reed Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation at Lower Cellulase Loadings	PNCC	Room 202-A
Thursday	12:30 PM	642f	Electro-Oxidation of Methanol on Pt-Ru Nanoparticles	PNCC	Room 303-B
Thursday	12:30 PM	664a	High Yield Biorefining Using Organosolv Processing	PNCC	Room 202-A
Thursday	12:30 PM	665c	Integrated Biorefinery Approach in a Conventional Kraft Pulp Mill Using Hemicellulose Pre-Extraction for Ethanol Production	PNCC	Room 204-A
Thursday	3:15 PM	696d	Design of In Situ Product Recovery Devices Using Polymeric Resins	PNCC	Room 202-A
Thursday	3:15 PM	704d	Erbia-Coated Quartz Fibers as a Selective Emitter for Low Temperature Tpv Applications	PNCC	Room 204-B
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Friday	8:00 AM	725a	Simulation of Pulp Mill Black Liquor Gasification with Gibbs Free Energy Minimization Approach	Loews	Lescaze Room

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Friday	8:00 AM	739e	Structure and Low Temperature Spectral Emissivity of Erbium Doped Metal Oxide Nanofibers for Application as Selective Emitters In Thermophotovoltaic Devices	PNCC	Room 108-B
Friday	10:45 AM	767a	Electrochemical Hydrogenation of Soybean Oil Using Transition Metal Carbide Based Electrocatalysts	PNCC	Room 201-A
Friday	10:45 AM	757d	Hydrogenations of Biomass-Related Substrates In Supercritical Media	PNCC	Room 202-A
Friday	10:45 AM	751d	Production of Organic Acid Esters by Extractive Fermentation and Enzymatic Esterification	PNCC	Room 103-C

NUCLEAR

NUCLEAR					
Day	Time	Paper #	Paper Title	Property	Room
Monday	8:30 AM	11c	Development of a Rotary Microfilter to Treat Radioactive Waste	Marriott	Franklin 12
Monday	12:30 PM	61c	A Rich History in Nuclear Materials Processing Technology at Los Alamos National Laboratory	Marriott	Franklin 1
Monday	12:30 PM	61b	Chemical Engineering and Nuclear Technology at Argonne National Laboratory	Marriott	Franklin 1
Monday	12:30 PM	61a	Chemical Engineering and Nuclear Technology at Oak Ridge National Laboratory	Marriott	Franklin 1
Monday	12:30 PM	104e	Computational and Experimental Analysis of the Flow In An Annular Centrifugal Contactor	Marriott	Franklin 4
Monday	12:30 PM	108b	Past and Future In Water Desalination – the Cheapest Most Valuable Product on Earth	Loews	Commonwealth B
Monday	12:30 PM	61d	Processes and Experiences at the Hanford Site	Marriott	Franklin 1
Monday	12:30 PM	61f	Savannah River National Laboratory – a 30 Year History in the Advancement of Environmental Science and Engineering	Marriott	Franklin 1
Monday	12:30 PM	61e	The Role of Chemical Engineering in the Development and Operation of Nuclear Technologies at the Idaho National Laboratory	Marriott	Franklin 1
Monday	12:30 PM	91d	Toxic Heavy Metal Removal by Hollow Fiber Membrane Solvent Extraction-Based Techniques	Marriott	Salon K
Monday	3:15 PM	140a	Modeling Solidification Induced Stresses in Ceramic Waste Forms Containing Nuclear Wastes	Marriott	Franklin 1
Monday	3:15 PM	140c	Modeling of Saltcake Dissolution	Marriott	Franklin 1
Monday	3:15 PM	140d	Radioactive High-Level Waste Sludge Rheology and Particle Size: Implications for Vitrification Pre-Treatment Operations	Marriott	Franklin 1
Monday	3:15 PM	150c	The Environmental Impact of the Cooling Water System of the Iter Reactor	Marriott	Franklin 11
Tuesday	8:30 AM	216e	A Portable Remote Chemical Analyzer for Identification of Deposits at Palo Verde Nuclear Generating Station	Marriott	Franklin 1
Tuesday	8:30 AM	196b	Fully-Implicit Finite Element Formulations for Stability and Bifurcation Analysis of Large-Scale Resistive Magneto-Hydrodynamic Systems	PNCC	Room 203-B
Tuesday	8:30 AM	196c	Model Reduction-Based Constrained Optimisation for Large-Scale Steady State Systems Using Black-Box Simulators	PNCC	Room 203-B
Tuesday	8:30 AM	215f	Simplification of the Inviscid Navier-Stokes Equations for Dynamic Simulation of Nonisothermal Gas Flow Networks	PNCC	Room 203-A
Tuesday	8:30 AM	201f	Simulation of Flowsheet Options for the H Concentration and Decomposition Section of the Sulfur-Iodine Thermochemical Cycle	Loews	Howe Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	8:30 AM	201b	Status of the Ineri Sulfur-Iodine Integrated-Loop Experiment	Loews	Howe Room
Tuesday	8:30 AM	201a	The Operation of the Bunsen Reaction In the Presence of Novel Organic Solvents	Loews	Howe Room
Tuesday	12:30 PM	273a	A Membrane Process for the Concentration of Sulfuric Acid for the Sulfur-Based Thermochemical Cycles	Loews	Howe Room
Tuesday	12:30 PM	281a	An Updated Site Scale Saturated Zone Ground Water Transport Model for Yucca Mountain	Marriott	Salon B
Tuesday	12:30 PM	273b	Application of Nafion Membranes to the Sulphur Iodine Cycle	Loews	Howe Room
Tuesday	12:30 PM	273c	Application of Radiation-Grafted Polymer Electrolyte Membrane to the Bunsen Reaction	Loews	Howe Room
Tuesday	12:30 PM	281b	Dynamic Multi-Species Model of Uranium-Bioremediation	Marriott	Salon B
Tuesday	12:30 PM	273d	Improving Sulphur Dioxide Yield In the Sulphuric Acid Thermal Decomposition Process through the Application of Membrane Separation	Loews	Howe Room
Tuesday	12:30 PM	273e	Recent Progress In Catalyst Development for Hydrogen Production In the Sulfur-Iodine Thermochemical Water Splitting Cycle	Loews	Howe Room
Tuesday	12:30 PM	273f	Simulation Study of Catalytic SO ₃ Decomposition In Heat Exchanger Reactor	Loews	Howe Room
Tuesday	3:15 PM	374e	A New Co Conversion Technology Based on Liquid/Liquid Extraction Column	Marriott	Franklin 1
Tuesday	3:15 PM	328c	A Systematic Methodology for the Evaluation of Alternative Thermochemical Cycles for Hydrogen Production	Loews	Howe Room
Tuesday	3:15 PM	374d	Disposition of Surplus Highly Enriched Uranium through Downblending and Purification for Placement In the Nuclear Fuel Cycle	Marriott	Franklin 1
Tuesday	3:15 PM	328d	Further Development of the Hydrolysis Reactors in the Cu-Cl Cycle	Loews	Howe Room
Tuesday	3:15 PM	328a	Influence of Steam Conversion Rate and Cathode Gas Composition on High Temperature Steam Electrolysis Cell Performance	Loews	Howe Room
Tuesday	3:15 PM	349b	Integrated Systems Engineering Approach to Manage the Installation and Start up of a Fusion Reactor	Marriott	Franklin 11
Tuesday	3:15 PM	349d	Optimization of Cooling System Using Rami Analysis	Marriott	Franklin 11
Tuesday	3:15 PM	374c	Removal of Acetic Acid from a Urex+ Raffinate Stream	Marriott	Franklin 1
Tuesday	3:15 PM	374a	Reprocessing Spent Nuclear Fuel Using Aqueous Carbonate-Peroxide Solutions	Marriott	Franklin 1
Tuesday	3:15 PM	374b	Solid State Separations of Cs and Sr from LiCl-Based Salt for Electrochemical Processing of Spent Oxide Nuclear Fuel	Marriott	Franklin 1
Tuesday	3:15 PM	349a	Systems Engineering and Risk Management on the National Compact Stellarator Project (NCSX)	Marriott	Franklin 11
Tuesday	3:15 PM	349c	Systems Engineering to Design a Water Cooling System for a Fusion Reactor	Marriott	Franklin 11
Wednesday	8:30 AM	391b	Aspen Plus Modeling of the Three-Reaction Version of the Copper-Chloride Thermochemical Cycle for Hydrogen Production from Water	Loews	Howe Room
Wednesday	12:30 PM	455c	Generation of Hydrogen Using a Multicell Stack Electrolyzer with Sulfur Dioxide Depolarized Anode	Loews	Howe Room
Wednesday	12:30 PM	455a	Hybrid Sulfur Cycle Flowsheets for PEM Electrolyzers with SO ₂ Vapor Feed	Loews	Howe Room
Wednesday	12:30 PM	455d	Measurements of the Simultaneous Solubility of Oxygen and Sulphur Dioxide in Water for the Hybrid Sulphur Thermochemical Cycle II	Loews	Howe Room

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Wednesday	3:15 PM	541c	Foamability of Liquid Particle Suspensions	PNCC	Room 103-A
Thursday	8:30 AM	599a	Dynamic Simulation of a Coupled Heat Transfer Loop and a Nuclear Reactor In a Nuclear Hydrogen Plant	Loews	Howe Room
Thursday	8:30 AM	603a	Filtration Testing with Hanford High Level Waste Samples and Simulants	Loews	Congress B Room
Thursday	8:30 AM	596e	First Principles Monte Carlo Simulations of Elemental Fluid Phase Equilibria	PNCC	Room 106-B
Thursday	8:30 AM	599e	High Temperature Heat Exchanger and Component Test Laboratory — a Graded Approach	Loews	Howe Room
Thursday	8:30 AM	599d	On the Design of Hydrogen Storage Vessels Utilizing a Complex Hydride Storage Material	Loews	Howe Room
Thursday	12:30 PM	635b	Hydrogen Production from Nuclear Energy; The DOE-NE Perspective	Loews	Howe Room
Thursday	3:15 PM	694b	Use of Technology Readiness Levels as a Development Tool	Loews	Howe Room
Thursday	6:00 PM	720f	Atomistic Simulation of Uranyl Ion Extraction by Tbp/dodecane Solution	PNCC	Exhibit Hall A
Thursday	6:00 PM	719g	Esix-Electrical Swing Ion Exchange:a Process Coupling Ion Exchange, Carbonic Acid Elution and Electroregeneration by Electrodialysis	PNCC	Exhibit Hall A
Thursday	6:00 PM	722f	Unraveling Entanglements and Polymer Rheology: New Rules	PNCC	Exhibit Hall A
Thursday	6:00 PM	720d	Use of Annular Centrifugal Contactors in the Extraction of Acetic Acid from Urex+ Streams	PNCC	Exhibit Hall A
Friday	8:00 AM	730f	Characterization and Classification of Gamma-Irradiated Adipose Tissues Using Raman Spectroscopy and Chemometrics	PNCC	Room 201-A
Friday	8:00 AM	734g	Computational Modeling of the Hydrolysis Reaction of Uranium Hexafluoride	PNCC	Room 103-A

GLOBAL CLIMATE CHANGE

CARBON SEQUESTRATION

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5ac	Enhanced CO ₂ Solubility In Aromatic and Alkyl Chain Substituted Imidazolium-Based Room Temperature Ionic Liquids	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ah	Molecularly Engineered Nanoporous Adsorbents: Synthesis, Characterization, and Application	PNCC	Exhibit Hall A
Monday	8:30 AM	55c	Cavitation In Metastable Nanoconfined Fluids	Marriott	Room 414/415
Monday	8:30 AM	54h	Cubic-Plus-Association (CPA) Equation of State for Water-Containing Mixtures	PNCC	Room 103-C
Monday	8:30 AM	32a	Defect-Free Composite Pd Membranes with High Temperature Long-Term Stability	Loews	Congress A Room
Monday	8:30 AM	21a	Industrial Perspectives In H ₂ Generation through Short Contact Time - Catalytic Partial Oxidation Technologies	PNCC	Room 203-A
Monday	8:30 AM	23f	Metal-Support Interactions In High-Temperature Stabilized Nanocomposites	PNCC	Room 202-A
Monday	8:30 AM	29b	Nanostructured Catalysts for CO ₂ Hydrogenation to Higher Hydrocarbons	PNCC	Room 103-A
Monday	8:30 AM	47d	Synthesis of Highly C-Oriented AlPO ₄₋₅ Membranes	PNCC	Room 202-B
Monday	8:30 AM	38c	Viscous Fingering In Chemical Systems	PNCC	Room 104-B
Monday	12:30 PM	123f	A Practical Route for Greening of Coal	Marriott	Salon C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	63b	Adsorption Separation of Carbon Dioxide, Methane and Nitrogen on H- and Na-Exchanged β -Zeolite	Marriott	Salon I
Monday	12:30 PM	63g	Characterization of the Adsorption of CO ₂ in Metal-Organic Framework and Zeolitic-Imidazolate Framework Materials by Density Functional Theory Calculations	Marriott	Salon I
Monday	12:30 PM	123e	Enhancement of the Desulfurization Performances of Waste Cement Particles by Acid Treatment	Marriott	Salon C
Monday	12:30 PM	80d	Layer-by-Layer (LBL) Assembled Highly Conductive, Transparent and Robust Thin Carbon Nanotube Films for Optoelectronics	PNCC	Room 202-A
Monday	12:30 PM	69b	Properties of Algal-Based Biodiesel	PNCC	Room 106-B
Monday	12:30 PM	122d	Tud-C: A Tunable, Hierarchically Structured Mesoporous Zeolite Composite	Marriott	Franklin 12
Monday	12:30 PM	63e	Two-Dimensional Equation-of-State Modeling of Adsorption of Coalbed Methane Gases	Marriott	Salon I
Monday	3:15 PM	175b	Adsorption Processes - History and Recent Developments	Loews	Commonwealth B
Monday	3:15 PM	132b	Adsorption and Diffusion of Gases in Mof-5, Mof-177 and Zeolite 5A	Marriott	Salon I
Monday	3:15 PM	132a	Application of Do & Do Models to Single-Walled Carbon Nanotubes: Insight into Water Adsorption in Microporous Carbons	Marriott	Salon I
Monday	3:15 PM	149a	Axial Particle Concentration Distribution in Two-Phase and Three-Phase Fluidized Beds with Binary Solid Mixtures	Loews	Congress B Room
Monday	3:15 PM	161g	Modeling Interfacial Properties of Real Fluids Involved in Enhanced Oil Recovery through the Use of a Density Functional Theory Based on the Saft-Vr Eos	PNCC	Room 107-A
Monday	3:15 PM	173b	Modular Teaching and Open Ended Design Projects	Marriott	Franklin 5
Tuesday	8:30 AM	252h	A Global Optimization-Quantum Chemistry Approach for a Predictive Saft Equation for Mixtures	PNCC	Room 103-C
Tuesday	8:30 AM	238c	Adsorption on Molecularly Rough Surfaces	Marriott	Salon I
Tuesday	8:30 AM	237b	Perspectives and Prospects for Thermodynamic Modeling	Loews	Commonwealth C
Tuesday	8:30 AM	249a	Preventing Plant Problems Before They Occur	PNCC	Room 201-A
Tuesday	8:30 AM	202c	Simulation of Algal Growth in a Photobioreactor	PNCC	Room 113-B
Tuesday	12:30 PM	274e	Contaminant Tolerant Catalysts for High Temperature Membrane Wgs Reaction	PNCC	Room 103-A
Tuesday	12:30 PM	311g	Imbibition Transition and the "Gate Effect" in Adsorption	Marriott	Salon I
Tuesday	12:30 PM	320b	Molecular Simulation of Clathrate Hydrates in Porous Media	PNCC	Room 103-C
Tuesday	12:30 PM	267d	Novel Algal Photobioreactor Design and Operation for the Biofuels Industry	PNCC	Room 113-B
Tuesday	12:30 PM	325f	Past 100 Years of Refining and Future Expectations	Marriott	Salon E
Tuesday	12:30 PM	267c	Results and Considerations of a Statistically Designed Experiment for the Production of Bio-Oil from a Lab-Scale Free Fall Pyrolyzer	PNCC	Room 113-B
Tuesday	12:30 PM	320a	Storage of Hydrogen as Clathrate Hydrate: Phase Equilibria, Thermodynamics and Kinetics	PNCC	Room 103-C
Tuesday	3:15 PM	340d	Adsorption of CO ₂ on Rock Surfaces by Molecular Simulations	Marriott	Salon I
Tuesday	3:15 PM	340e	Metal Organic Frameworks for Carbon Dioxide Adsorption from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	335e	Mixed Metaloxide Supported CeO ₂ Catalysts for the Transesterification of Soybean Oil with Methanol	PNCC	Room 103-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	3:15 PM	380e	Sustainable Engineering: A Model for Engineering Education in the Twenty-First Century?	Loews	The Terrace Room
Tuesday	3:15 PM	380a	The Elements of Sustainability	Loews	The Terrace Room
Wednesday	8:30 AM	395b	Fundamental Design of Bio-Based Materials	PNCC	Room 204-A
Wednesday	8:30 AM	417j	Miscible Viscous Fingering In Three Dimensions:Fractal to Compact Crossover and Interfacial Roughness:Pore-Level Simulations	PNCC	Room 104-A
Wednesday	8:30 AM	395c	New Biobased Materials from Co-Products	PNCC	Room 204-A
Wednesday	8:30 AM	394c	Process Development to Reduce Minor Component Content In Biodiesel	PNCC	Room 103-B
Wednesday	8:30 AM	394d	Study of Antioxidants on the Oxidative Stability of Biodiesel	PNCC	Room 103-B
Wednesday	8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday	12:30 PM	458b	A Process Integration Approach to Strategic Design and Scheduling of Multi-Feedstock Biodiesel Plants	PNCC	Room 201-B
Wednesday	12:30 PM	459e	Biocomposite Materials for Building and Industrial Application	PNCC	Room 204-A
Wednesday	12:30 PM	475c	CO2 Reduction by Nanoscale Galvanic Couples	Marriott	Salon C
Wednesday	12:30 PM	472e	Enhanced Solubility of CO2 In Aromatic and Alkyl Chain Substituted Imidazolium-Based Room Temperature Ionic Liquids	Loews	Washington B Room
Wednesday	12:30 PM	505a	Low-Cost H2 Production for Fuel Cells Using Adsorption Enhanced Reforming	Marriott	Salon K
Wednesday	12:30 PM	488a	Molecular Simulation of the Transport of Flue Gases through Surface-Modified Inorganic Membranes	Loews	Congress A Room
Wednesday	12:30 PM	459c	Multifunctional Nanobiocomposites	PNCC	Room 204-A
Wednesday	12:30 PM	515a	Prediction of the Production Condition of Natural Gas from Hydrate Deposits	PNCC	Room 105-B
Wednesday	12:30 PM	468e	Representation of a Continuous Particle Size Distribution Using a New Polydisperse Kinetic Theory	Loews	Commonwealth B
Wednesday	12:30 PM	511b	Sustainable Strategies for Biofuel Production	PNCC	Room 202-A
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday	3:15 PM	542e	Analysis and Design of Integrated Industrial and Ecological Systems for a Greener Cellulosic Ethanol	PNCC	Room 202-B
Wednesday	3:15 PM	526a	Characterization of Tunable Nanoporous Carbon Films of Capacitance-Storage Function	Marriott	Salon J
Wednesday	3:15 PM	563d	Experimental Kinetic Analysis of Steam and CO2 Gasification of Biomass Fuels	Loews	Lescaze Room
Wednesday	3:15 PM	552a	Oxy-Coal Combustion: Effects of PO2 on Coal Jet Stability In O2/CO2 Environments	Marriott	Salon D
Wednesday	3:15 PM	552b	Role of Recycle on Emissions from Oxy-Coal Combustion	Marriott	Salon D
Wednesday	6:00 PM	578y	A Novel Integrated Design of Wastewater and Heat Exchange Networks Based on Cost Estimation	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573af	Biogas to Syngas Catalysis-Renewable Process for Fischer-Tropsch Liquid Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573f	Equilibrium Adsorption Characteristics of Polysaccharide Adsorbents	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ai	Experimental Kinetic Analysis of CO2 and Steam Gasification of Biomass Fuels	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	6:00 PM	573g	Fractionating Recalcitrant Miscanthus by a Two-Stage Treatment Under Mild Reaction Conditions	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573k	Fractionation and Optimization of Switchgrass Pretreatment Via Cellulose-Solvent-Based Lignocellulose Fractionation (CSLF) at Lower Cellulase Loadings	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577u	Industrial Biosystems Engineering: Application of Systems Engineering In Biorefinery Systems	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577h	Minimization Under Uncertainty of Fresh Water Consumption for Pulverized Carbon (PC) and Integrated Gasification Combined-Cycle (IGCC) Power Plants	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573z	Process Optimization for Maximum Ethanol Production Using Different Ethanologens from Afex Treated Rice Straw	PNCC	Exhibit Hall A
Wednesday	6:00 PM	571a	Protocols for the Identification of Membrane Protein Interaction Networks	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573t	Two-Phase Flow Behaviors In Microtube Reactors during Biodiesel Production	PNCC	Exhibit Hall A
Thursday	8:30 AM	582e	Carbon Dioxide Reforming of Methane to Synthesis Gas Over Nickel Incorporated Ni-Mcm-41 Catalysts	PNCC	Room 102-A
Thursday	8:30 AM	586c	Developing and Integrating Sustainable Chemical Processes into Existing Petro-Chemical Plant Complexes	Marriott	Room 502
Thursday	8:30 AM	623d	Experience with Ash Modifiers to Control Pluggage of Biomass Furnaces and Heat Transfer Surfaces	PNCC	Room 204-A
Thursday	8:30 AM	592d	Mixed-Integer Bi-Objective Optimization Algorithm for Solving Energy Supply Chain Problems	PNCC	Room 201-B
Thursday	8:30 AM	588e	Teaching Nanoscale Science and Engineering to Chemical Engineers at Georgia Tech	PNCC	Room 104-B
Thursday	12:30 PM	661b	A Comprehensive Study on the Diamino Modification of Polyimides	Loews	Congress B Room
Thursday	12:30 PM	627a	Adsorption and Diffusion of Gases In ETS-10 and Mof Adsorbents	Marriott	Salon J
Thursday	12:30 PM	663a	Capturing the Business Value of Sustainable Performance In the Chemical Industry	Marriott	Room 502
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	631a	Comparison of Processes for Separation and Sequestration of CO2 from the Combustion of Coal	Marriott	Salon K
Thursday	12:30 PM	635a	Department of Energy Hydrogen from Coal Program	Loews	Howe Room
Thursday	12:30 PM	631f	Effect of Carbonic Anhydrases on Carbonation of Mg-Bearing Minerals for Environmentally-Benign Carbon Sequestration	Marriott	Salon K
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	627c	High Temperature Air Separation by Perovskite-Type Oxide Sorbents-Heat Effect Minimization	Marriott	Salon J
Thursday	12:30 PM	631d	Modeling Gas Hydrates Containing Carbon Dioxide, Hydrogen and Methane Using Simplified Pc-Saft	Marriott	Salon K
Thursday	12:30 PM	669e	Multicomponent Gauge Cell Monte Carlo Method: Determination of Chemical Potentials In Dense and Inhomogeneous Systems	PNCC	Room 201-C
Thursday	3:15 PM	709c	An International Assessment of R&D In Simulation-Based Engineering and Science: Introduction	PNCC	Room 103-A
Thursday	3:15 PM	676d	CO2 Sequestration: Temperature and Gas Compositional Effects on the Kinetics and Mineralogical Reactions	Marriott	Salon I

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	701c	Characterization of Sulfur Resistance of Pd-Au Hydrogen Separation Membranes Prepared by Galvanic Displacement	Loews	Congress A Room
Thursday	3:15 PM	675a	Computational Design of Metal-Organic Frameworks for the Adsorption of CO ₂	Marriott	Salon J
Thursday	3:15 PM	692g	Development of a Vanadium Oxides Loading Method on Solid Supports	PNCC	Room 102-B
Thursday	3:15 PM	686c	Effect of Sulfur Contaminants on the Performance of Oxygen Carriers In Chemical Looping Combustion	Marriott	Salon K
Thursday	3:15 PM	676b	Effects of Permeability Heterogeneity on CO ₂ Sequestration In Brine Formation	Marriott	Salon I
Thursday	3:15 PM	676c	Including Long-Range Electrostatic Interactions In Carbon Dioxide Sequestration Models	Marriott	Salon I
Thursday	3:15 PM	709a	International Study of R&D In Simulation-Based Engineering and Science: Overview and Executive Summary	PNCC	Room 103-A
Thursday	3:15 PM	676a	Modeling the Carbon Dioxide Sequestration Process: Technology Gaps and Validation	Marriott	Salon I
Thursday	3:15 PM	676e	Numerical Investigation on Low-Viscosity-Ratio Drop Breakup In a Contraction Flow	Marriott	Salon I
Thursday	3:15 PM	699a	Palladium Membranes on Mesoporous Ceramic Supports: Effect of Metal-Support Interface on Hydrogen Permeation	Loews	Congress B Room
Thursday	3:15 PM	709d	Simulation-Based Engineering and Science - Discussion	PNCC	Room 103-A
Thursday	3:15 PM	709b	Simulation-Based Engineering and Science: Materials Applications and Multiscale Modeling and Simulation for Materials, Energy and Life Sciences	PNCC	Room 103-A
Thursday	3:15 PM	696a	Sustainable Biomass Based Biorefinery	PNCC	Room 202-A
Thursday	3:15 PM	701b	The Effect of H ₂ S on the Long-Term Stability of Pd-Cu Membranes and the Characteristics of H ₂ S Poisoning of Electroless Deposited Pd	Loews	Congress A Room
Thursday	3:15 PM	676f	Uncertainty Modeling In Sequestration Applications	Marriott	Salon I
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Thursday	6:00 PM	722aq	Environmentally Friendly Chemical Synthesis and Catalysis for Improved Polyethylene Products	PNCC	Exhibit Hall A
Thursday	6:00 PM	719b	Generalized SLD-PR Adsorption Model for Pure and Mixed Gases on Coal Matrices	PNCC	Exhibit Hall A
Thursday	6:00 PM	722av	Novel Organometallic Low Energy Gap Materials and Synthetic Models of Carbon Monoxide Hydrogenase (CODH) In Biological System	PNCC	Exhibit Hall A
Thursday	6:00 PM	721a	Separation of the Benzene/cyclohexane Mixture by a Distillative Crystallization Technology	PNCC	Exhibit Hall A
Friday	8:00 AM	747a	Carbon Neutrality In Chemical Process Design: The Pinch Design Concept and Options Trading Strategies	PNCC	Room 106-A/B
Friday	8:00 AM	740a	Kinetic Phenomena In Low-Temperature CO Oxidation on Nanostructured Pt Catalysts	PNCC	Room 102-A
Friday	10:45 AM	768c	Electrochemical Performance of Direct Carbon Fuel Cell Based on Molten Carbonate Eutectic Electrolytes	PNCC	Room 111-B
Friday	10:45 AM	762e	Equilibrium Path Sampling Study of Methane Diffusion In Natural Gas Hydrates	PNCC	Room 103-A
Friday	10:45 AM	757f	Production of Stable and up-Gradable Pyrolysis Liquid Transportation Fuel Intermediates from Lignin and Related Biomass	PNCC	Room 202-A
Friday	10:45 AM	772a	Sorption Equilibria of CO ₂ In Atactic Polystyrene by Molecular Simulation	PNCC	Room 103-B

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



CARBON CAPTURE

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5x	Catalytic Strategies for the Molecular Engineering of Fuels	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ac	Enhanced CO ₂ Solubility In Aromatic and Alkyl Chain Substituted Imidazolium-Based Room Temperature Ionic Liquids	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ah	Molecularly Engineered Nanoporous Adsorbents: Synthesis, Characterization, and Application	PNCC	Exhibit Hall A
Monday	8:30 AM	14a	Biobutanol Production Via Fermentation of Hot-Water Wood Extract Sugars	PNCC	Room 106-B
Monday	8:30 AM	55c	Cavitation In Metastable Nanoconfined Fluids	Marriott	Room 414/415
Monday	8:30 AM	32c	Demonstration of Steam Methane Reforming In a Membrane Reactor for Hydrogen Production	Loews	Congress A Room
Monday	8:30 AM	39e	Design and Automation of a Multi-Purpose Pilot Plant for Fundamental Packed Column Parameter Study and Absorption and Desorption of Carbon Dioxide in Chemical Solvents	Loews	Commonwealth A2
Monday	8:30 AM	12f	Development of Efficient Organisms Using a Combination of Rational Strain Design and Metabolic Evolution	PNCC	Room 113-C
Monday	8:30 AM	14b	Engineering Escherichia Coli for Improved Ethanol and Butanol Tolerance for Biofuel Production	PNCC	Room 106-B
Monday	8:30 AM	30a	Humidity Effects on CO ₂ Removal by Adsorption In Zeolites: Equilibria and Kinetics Study	Marriott	Salon I
Monday	8:30 AM	23f	Metal-Support Interactions In High-Temperature Stabilized Nanocomposites	PNCC	Room 202-A
Monday	8:30 AM	47b	Rapid Fabrication of Metal Organic Framework Thin Films Using Microwave-Induced Thermal Deposition	PNCC	Room 202-B
Monday	12:30 PM	63b	Adsorption Separation of Carbon Dioxide, Methane and Nitrogen on H-and Na-Exchanged β -Zeolite	Marriott	Salon I
Monday	12:30 PM	69d	Bioenergetics of Succinic Acid Production by E.Coli	PNCC	Room 106-B
Monday	12:30 PM	63f	CO ₂ Adsorption on Mesoporous Porous Silica Surfaces Containing Amine-Like Motifs	Marriott	Salon I
Monday	12:30 PM	123h	Catalytic CO ₂ Recycle (CCR) Technology	Marriott	Salon C
Monday	12:30 PM	63g	Characterization of the Adsorption of CO ₂ In Metal-Organic Framework and Zeolitic-Imidazolate Framework Materials by Density Functional Theory Calculations	Marriott	Salon I
Monday	12:30 PM	69a	Complete Microbiological Fuel Cell. A Photosynthetic Cathode Coupled to a Fermentative Anode	PNCC	Room 106-B
Monday	12:30 PM	123e	Enhancement of the Desulfurization Performances of Waste Cement Particles by Acid Treatment	Marriott	Salon C
Monday	12:30 PM	111a	Membrane Module Design	Loews	Congress A Room
Monday	12:30 PM	86h	Natural Gas Based Hydrogen Production with No Carbon Dioxide Emissions	Marriott	Salon B
Monday	12:30 PM	111e	New Membranes for Hydrogen Purification and Proton Transport for Fuel Cells	Loews	Congress A Room
Monday	12:30 PM	86f	Pre- and Post-Combustion Carbon Capture Using Metal-Organic Framework Adsorbents	Marriott	Salon B
Monday	3:15 PM	175b	Adsorption Processes - History and Recent Developments	Loews	Commonwealth B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	3:15 PM	167f	Coagulation of Charged Nanoparticles: Refined Classical Approach and Its Limits	Marriott	Salon C
Monday	3:15 PM	146a	From Raw Cassava Pulp to L-Lactic Acid Via Fermentation by <i>Rhizopus Oryzae</i>	PNCC	Room 106-B
Monday	3:15 PM	143c	Large-Scale Nonlinear Programming: An Integrating Framework for Enterprise-Wide Dynamic Optimization	PNCC	Room 204-A
Monday	3:15 PM	171f	Modeling and Simulation of Catalytic Membrane Reactor for Application In Life Support Systems and In Situ Resource Utilization	PNCC	Room 103-B
Monday	3:15 PM	173b	Modular Teaching and Open Ended Design Projects	Marriott	Franklin 5
Monday	6:00 PM	185s	Comparison of Functionalized Amine Energetics for CO ₂ Capture	PNCC	Exhibit Hall A
Monday	6:00 PM	188ac	Effect of Crystallization Growth Inhibitors In the Synthesis of Sapo-34	PNCC	Exhibit Hall A
Tuesday	8:30 AM	238c	Adsorption on Molecularly Rough Surfaces	Marriott	Salon I
Tuesday	8:30 AM	202d	Algae-Based Hydrocarbon Production	PNCC	Room 113-B
Tuesday	8:30 AM	218a	Applications of a Micropyrolysis Index (MPI) towards Molecular Engineering of Fuels	Marriott	Salon D
Tuesday	8:30 AM	200g	Development of a New Synthesis Gas Production Catalyst and Process	Loews	Commonwealth D
Tuesday	8:30 AM	202f	Production of Biodiesel from Microalgae	PNCC	Room 113-B
Tuesday	8:30 AM	320c	Property and Process Modeling of Aqueous Ammonia Processes for Post-Combustion Carbon Dioxide Capture	PNCC	Room 103-C
Tuesday	8:30 AM	218f	Rules to Select Solvents for Scrubbing CO ₂ from Fossil Power Stations	Marriott	Salon D
Tuesday	8:30 AM	202b	Sealing Green	PNCC	Room 113-B
Tuesday	8:30 AM	237d	Simulation of Electrolytes: Model Development and Industrial Practice	Loews	Commonwealth C
Tuesday	8:30 AM	237f	The Role of Experiments In the Development of Chemical Technology	Loews	Commonwealth C
Tuesday	12:30 PM	293d	A Physical Absorption Process for the Capture of CO ₂ from CO ₂ -Rich Natural Gas Streams Using Hydrocarbon Solvents, with Post-Capture CO ₂ Re-Compression	PNCC	Room 201-B
Tuesday	12:30 PM	291c	DuPont: Building on the Past towards a Sustainable Future	Loews	Washington C Room
Tuesday	12:30 PM	274b	Effect of Reaction Temperature on the Performance of Thermal Swing Sorption Enhanced Reaction Process for Simultaneous Production of Fuel Cell Grade H ₂ and Compressed CO ₂ from Synthesis Gas	PNCC	Room 103-A
Tuesday	12:30 PM	311g	Imbibition Transition and the "Gate Effect" In Adsorption	Marriott	Salon I
Tuesday	12:30 PM	320d	Molecular Simulation of the Properties of Carbon Dioxide in Salt Water: Implications for Carbon Capture in Oceans	PNCC	Room 103-C
Tuesday	12:30 PM	325f	Past 100 Years of Refining and Future Expectations	Marriott	Salon E
Tuesday	12:30 PM	296d	The Role of Experimental Data in Applied Thermodynamics	Loews	Commonwealth C
Tuesday	3:15 PM	372b	A Graphical Approach to Improving Gasification	PNCC	Room 201-B
Tuesday	3:15 PM	340d	Adsorption of CO ₂ on Rock Surfaces by Molecular Simulations	Marriott	Salon I
Tuesday	3:15 PM	340a	Adsorption of Carbon Dioxide on Modified SBA-15	Marriott	Salon I
Tuesday	3:15 PM	340b	Design, Characterization and Application of a Hyperbranched Aminosilica (HAS) High-Capacity Sorbent for CO ₂ Capture from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	368b	Development of Solid Waste Landfills	Loews	Lescaze Room
Tuesday	3:15 PM	340c	Development of Sulfur Tolerant High Durability CO ₂ Sorbents at High Temperatures	Marriott	Salon I
Tuesday	3:15 PM	330f	Economic and Environmental Analysis of Hydrogen Production Strategies	PNCC	Room 113-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	3:15 PM	379e	Influence of Network Structural Modifications on the Dynamic Relaxation Characteristics of Crosslinked Poly(ethylene oxide) Copolymer Membranes	Marriott	Room 414/415
Tuesday	3:15 PM	340e	Metal Organic Frameworks for Carbon Dioxide Adsorption from Flue Gas	Marriott	Salon I
Tuesday	3:15 PM	340f	Pressure Swing Adsorption Cycles for Carbon Dioxide Capture	Marriott	Salon I
Tuesday	3:15 PM	330c	Windfuels – Competitive Transportation Fuels from Wind Energy and Waste CO ₂	PNCC	Room 113-B
Wednesday	8:30 AM	395c	New Biobased Materials from Co-Products	PNCC	Room 204-A
Wednesday	8:30 AM	426h	Structural Changes In Nanoporous Solids Due to Fluid Adsorption: Thermodynamic Analysis and Monte Carlo Simulations	Marriott	Salon I
Wednesday	8:30 AM	399a	Syngas Chemical Looping Process	Loews	Congress B Room
Wednesday	8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday	12:30 PM	474c	Analysis of Absorption with Complex Reversible Reaction	Marriott	Franklin 4
Wednesday	12:30 PM	459b	Biobased Plastic Derived from Cereal Proteins	PNCC	Room 204-A
Wednesday	12:30 PM	505f	CO ₂ Capture by Moving Bed Temperature Swing Adsorption	Marriott	Salon K
Wednesday	12:30 PM	472e	Enhanced Solubility of CO ₂ In Aromatic and Alkyl Chain Substituted Imidazolium-Based Room Temperature Ionic Liquids	Loews	Washington B Room
Wednesday	12:30 PM	472a	Hollow Fiber Membrane Contactor for Characterization of Gas/solvents Thermodynamics and Mass Transfer Properties	Loews	Washington B Room
Wednesday	12:30 PM	481f	Hollow-Fiber-Based Adsorbent System for CO ₂ Capture from Flue Gas	PNCC	Room 113-B
Wednesday	12:30 PM	490f	Metal–Organic Frameworks for CO ₂ Storage and CO ₂ /CH ₄ Separation	Marriott	Salon I
Wednesday	12:30 PM	472c	Microporous Silica Coatings on Mesoporous SiO ₂ and ZrO ₂ Supports: Membranes for High Temperature Gas Separation Applications	Loews	Washington B Room
Wednesday	12:30 PM	490h	Molecular Simulation of CO ₂ and CO ₂ /CH ₄ Mixture Adsorption and Diffusion In Metal-Organic Frameworks	Marriott	Salon I
Wednesday	12:30 PM	472f	Molecular Simulation of Pure and Mixture Gases Absorption In Ionic Liquids	Loews	Washington B Room
Wednesday	12:30 PM	488a	Molecular Simulation of the Transport of Flue Gases through Surface-Modified Inorganic Membranes	Loews	Congress A Room
Wednesday	12:30 PM	505e	Optimal Synthesis of a Pressure Swing Adsorption Process for CO ₂ Capture	Marriott	Salon K
Wednesday	12:30 PM	512d	Photosynthetic Biohydrogen: A Case Study Integrating Sustainability into the Student Design Experience	Loews	Lescaze Room
Wednesday	12:30 PM	511e	Providing a Sustained Biomass Supply: Implications of Feedstock Variation	PNCC	Room 202-A
Wednesday	12:30 PM	515c	Structure-Property Relationships for the Optimization of Reversible Ionic Liquid Solvents	PNCC	Room 105-B
Wednesday	12:30 PM	511b	Sustainable Strategies for Biofuel Production	PNCC	Room 202-A
Wednesday	12:30 PM	516e	The Interdisciplinary Nature of Energy Applications. A Course In Carbon Capture and Sequestration	Marriott	Franklin 1
Wednesday	12:30 PM	512a	Uncertainty Analysis of An Igcc System with Single-Stage Entrained-Flow Gasifier	Loews	Lescaze Room
Wednesday	12:30 PM	460e	Understanding and Harnessing the Microbial Fermentation of Glycerol. A New Path for the Production of Biochemicals	PNCC	Room 202-B
Wednesday	12:30 PM	477d	Using Quantitative Modeling of Molecular Transport to Accelerate Development of Membranes for Gas Separations	Loews	Congress B Room

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	3:15 PM	537d	Chemical Analysis and Kinetics of Wood Extract Hydrolysis	PNCC	Room 204-A
Wednesday	3:15 PM	543b	Cyclic Hybrid Adsorbent-Membrane Reactor (HAMR) Studies for Hydrogen Production	Loews	Congress A Room
Wednesday	3:15 PM	563d	Experimental Kinetic Analysis of Steam and CO ₂ Gasification of Biomass Fuels	Loews	Lescaze Room
Wednesday	3:15 PM	529e	First Principle Calculations of Supported Catalysts: CO Binding on MgO Supported Gold Clusters and Nanoparticles	Marriott	Room 401/402
Wednesday	3:15 PM	537a	Hot-Water Extraction and Forest Biorefinery	PNCC	Room 204-A
Wednesday	3:15 PM	552c	Modeling, Construction and Operation of An Integrated Pollutant Removal Process at An Oxy-Combustion Test Facility	Marriott	Salon D
Wednesday	3:15 PM	552a	Oxy-Coal Combustion: Effects of PO ₂ on Coal Jet Stability In O ₂ /CO ₂ Environments	Marriott	Salon D
Wednesday	3:15 PM	552f	Oxycoal Firing In Circulating Fluidized Bed Boilers	Marriott	Salon D
Wednesday	3:15 PM	552e	Oxygen Sorbents for Oxy-Fuel Combustion	Marriott	Salon D
Wednesday	3:15 PM	552b	Role of Recycle on Emissions from Oxy-Coal Combustion	Marriott	Salon D
Wednesday	3:15 PM	563b	Synergistic Use of Solar Hydrogen with Biomass to Produce Biofuels	Loews	Lescaze Room
Wednesday	6:00 PM	573p	Bioethanol Production from Barley Hull Using Saa (Soaking in Aqueous Ammonia) Pretreatment	PNCC	Exhibit Hall A
Wednesday	6:00 PM	571ba	Development and Application of High-Throughput Flow-Cytometric Techniques for Analyzing Prokaryotic Cell Cultures	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573m	Effect of Mixing on Enzymatic Hydrolysis of Cellulosic Biomass	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ai	Experimental Kinetic Analysis of CO ₂ and Steam Gasification of Biomass Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	571bj	Hydrocarbon Production In Algae	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575au	One Body Composite of Catalyst and CO ₂ Absorbent for Sorption Enhanced Reforming Process	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573z	Process Optimization for Maximum Ethanol Production Using Different Ethanologens from Afex Treated Rice Straw	PNCC	Exhibit Hall A
Thursday	8:30 AM	593e	A Monte Carlo Study of Molecular Selectivity of Binary Mixtures In Ordered and Disordered Microporous Carbon	Marriott	Salon I
Thursday	8:30 AM	592a	Comparison of Coal Based Hydrogen and Electricity Generation Process Under a Carbon Constrained Scenario	PNCC	Room 201-B
Thursday	8:30 AM	583d	Impact of Oxygen Incorporation In Molecular Structure on Pyrolytic Soot Formation and Oxidizability	PNCC	Room 113-A
Thursday	8:30 AM	620e	Knockout of Transcriptional Regulators for Decoupling Solvent Formation from Sporulation In Clostridium Acetobutylicum	PNCC	Room 307-B
Thursday	8:30 AM	599c	Magnesian Calcite Sorbent for Carbon Dioxide Capture during Hydrogen Production from Fossil Fuels	Loews	Howe Room
Thursday	8:30 AM	589f	PEM-Based Electrochemical Separation of Gases	PNCC	Room 303-B
Thursday	8:30 AM	597c	Particle Size Optimization for Syngas Chemical Looping Process	Loews	Washington B Room
Thursday	8:30 AM	588e	Teaching Nanoscale Science and Engineering to Chemical Engineers at Georgia Tech	PNCC	Room 104-B
Thursday	12:30 PM	627a	Adsorption and Diffusion of Gases In ETS-10 and Mof Adsorbents	Marriott	Salon J
Thursday	12:30 PM	634g	Biogas: Sludge to Biogas	PNCC	Room 113-A
Thursday	12:30 PM	663a	Capturing the Business Value of Sustainable Performance In the Chemical Industry	Marriott	Room 502

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	631e	Demonstration of Carbon Dioxide Capture from Coal-Fired Flue Gas Using Calcium-Based Sorbents	Marriott	Salon K
Thursday	12:30 PM	639f	Demonstration of a Viable Hydrogenase Assay for Syngas Fermentation to Ethanol: Quantitative Accounting for Competing Reactions, Enzyme Inhibition, and Diffusion Limitations	PNCC	Room 203-A
Thursday	12:30 PM	635a	Department of Energy Hydrogen from Coal Program	Loews	Howe Room
Thursday	12:30 PM	642f	Electro-Oxidation of Methanol on Pt-Ru Nanoparticles	PNCC	Room 303-B
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	627c	High Temperature Air Separation by Perovskite-Type Oxide Sorbents-Heat Effect Minimization	Marriott	Salon J
Thursday	12:30 PM	665c	Integrated Biorefinery Approach in a Conventional Kraft Pulp Mill Using Hemicellulose Pre-Extraction for Ethanol Production	PNCC	Room 204-A
Thursday	12:30 PM	631b	Modeling CO ₂ Capture In Amine Solvents with An Advanced Association Model: Process Optimisation and a Platform for Solvent Design	Marriott	Salon K
Thursday	12:30 PM	631c	Modeling of Carbon Dioxide Absorption/desorption In Amine Solutions	Marriott	Salon K
Thursday	12:30 PM	669e	Multicomponent Gauge Cell Monte Carlo Method: Determination of Chemical Potentials In Dense and Inhomogeneous Systems	PNCC	Room 201-C
Thursday	12:30 PM	672d	Parameter Estimation for Phase Equilibrium Problems Via Bilevel Programs	PNCC	Room 201-B
Thursday	12:30 PM	627f	Pre-Combustion CO ₂ Capture at High Temperature with Alkaline Promoted Aluminas and Hydrotalcites: The Crucial Role of Alkaline Cations In CO ₂ Adsorption	Marriott	Salon J
Thursday	12:30 PM	626e	Systematic Methods for Process Synthesis and Design	PNCC	Room 109-B
Thursday	12:30 PM	627b	Temperature and Pressure Dependent Non-Equilibrium Kinetic Model That Describes the Adsorption Behavior of CO ₂ In K-Promoted Htlc	Marriott	Salon J
Thursday	12:30 PM	631g	Use of Ionic Liquids as Physical Solvents for Selective Capture of CO ₂ from Fuel Gas Streams	Marriott	Salon K
Thursday	12:30 PM	645b	Vapor-Liquid Equilibria of Organic Sulfur Species (n-Propylmercaptan, n-Butylmercaptan and Dimethylsulfide) in Mdea Aqueous Solution in the Presence of Acid Gases	PNCC	Room 103-C
Thursday	3:15 PM	686d	A Dual Circulating Fluidized Bed (DCFB) System for Chemical Looping Processes	Marriott	Salon K
Thursday	3:15 PM	709c	An International Assessment of R&D In Simulation-Based Engineering and Science: Introduction	PNCC	Room 103-A
Thursday	3:15 PM	699e	Asymmetric Membrane Formation by Hollow Fiber Spinning - Theory and Experiment	Loews	Congress B Room
Thursday	3:15 PM	686f	Calcium Looping Process for Hydrogen, Electricity and Liquid Fuel Production with In-Situ Carbon Dioxide and Sulfur Capture	Marriott	Salon K
Thursday	3:15 PM	686e	Coal Direct Chemical Looping (CDCL) Process	Marriott	Salon K
Thursday	3:15 PM	675a	Computational Design of Metal-Organic Frameworks for the Adsorption of CO ₂	Marriott	Salon J
Thursday	3:15 PM	701f	Development of Group V Based Metal Membranes for Hydrogen Separation	Loews	Congress A Room
Thursday	3:15 PM	690b	Direct Carbon Conversion in Carbon Dioxide as the Fuel for Solid-Oxide Fuel Cells	PNCC	Room 111-B
Thursday	3:15 PM	686c	Effect of Sulfur Contaminants on the Performance of Oxygen Carriers In Chemical Looping Combustion	Marriott	Salon K

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	696b	Enzymatic Hydrolysis and Ethanol Production from Afex Pretreated Bagasse at High Solid Loading Using Recombinant Ethanologens	PNCC	Room 202-A
Thursday	3:15 PM	709a	International Study of R&D In Simulation-Based Engineering and Science: Overview and Executive Summary	PNCC	Room 103-A
Thursday	3:15 PM	686a	Investigation of Chemical Looping Combustion of Coal Utilizing Various Oxygen Carriers	Marriott	Salon K
Thursday	3:15 PM	675g	Metal-Organic Aerogels-a New Kind of Porous Material	Marriott	Salon J
Thursday	3:15 PM	717b	Molecular Design of Self-Assembling Copolymer and Surfactant Systems	Loews	Washington A Room
Thursday	3:15 PM	686b	Ni/La-Al ₂ O ₃ Oxygen Carrier for Fluidized Bed Chemical-Looping Combustion	Marriott	Salon K
Thursday	3:15 PM	694e	Process Integration and Optimization of Hydrogen Production Strategies	Loews	Howe Room
Thursday	3:15 PM	709d	Simulation-Based Engineering and Science - Discussion	PNCC	Room 103-A
Thursday	3:15 PM	709b	Simulation-Based Engineering and Science: Materials Applications and Multiscale Modeling and Simulation for Materials, Energy and Life Sciences	PNCC	Room 103-A
Thursday	3:15 PM	701b	The Effect of H ₂ S on the Long-Term Stability of Pd-Cu Membranes and the Characteristics of H ₂ S Poisoning of Electroless Deposited Pd	Loews	Congress A Room
Thursday	6:00 PM	718o	Absorption of CO ₂ on CaSiO ₃	PNCC	Exhibit Hall A
Thursday	6:00 PM	722av	Novel Organometallic Low Energy Gap Materials and Synthetic Models of Carbon Monoxide Hydrogenase (CODH) In Biological System	PNCC	Exhibit Hall A
Thursday	6:00 PM	721j	Structured Adsorbent Bed for Rapid Adsorption and Regeneration Process	PNCC	Exhibit Hall A
Thursday	6:00 PM	722f	Unraveling Entanglements and Polymer Rheology: New Rules	PNCC	Exhibit Hall A
Friday	8:00 AM	747a	Carbon Neutrality In Chemical Process Design: The Pinch Design Concept and Options Trading Strategies	PNCC	Room 106-A/B
Friday	8:00 AM	725a	Simulation of Pulp Mill Black Liquor Gasification with Gibbs Free Energy Minimization Approach	Loews	Lescaze Room
Friday	8:00 AM	734b	Systematic Study on the Solubility of Gases in Alkyl-Imidazolium Based Ionic Liquids from a Molecular Modeling Approach	PNCC	Room 103-A
Friday	10:45 AM	761a	Design of a Multi-Tube Membrane Reformer for Methane Steam Reforming	PNCC	Room 202-B
Friday	10:45 AM	768c	Electrochemical Performance of Direct Carbon Fuel Cell Based on Molten Carbonate Eutectic Electrolytes	PNCC	Room 111-B

CARBON MONITORING/MODEL

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5x	Catalytic Strategies for the Molecular Engineering of Fuels	PNCC	Exhibit Hall A
Monday	12:30 PM	128h	Cfd Model for Determining Holdup Oil-Water Dispersion in Turbulent Flow	PNCC	Room 104-A
Monday	12:30 PM	105b	Spectroscopic and Microscopic Characterization of Ambient Carbonaceous Particulate	Marriott	Salon A
Monday	12:30 PM	100e	Stability Analysis of H ₂ Clathrate Hydrates by Ab Initio Calculations	PNCC	Room 202-B
Monday	12:30 PM	69c	The Influence of Redox Potential and Sulfide Concentration In the Fermentation of Syngas to Ethanol	PNCC	Room 106-B
Monday	3:15 PM	180d	Carbon Emissions from Tropical Fires	Marriott	Franklin 6
Monday	3:15 PM	167f	Coagulation of Charged Nanoparticles: Refined Classical Approach and Its Limits	Marriott	Salon C

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	3:15 PM	180e	Regional and Global Perspectives of Megacity Air Pollution	Marriott	Franklin 6
Monday	3:15 PM	155d	The Evolution of Electrochemical Reaction Engineering and Future Directions	Loews	Lescaze Room
Monday	6:00 PM	185h	First-Principles Theoretical Analysis of Carbon Allotropes and Nanostructures Formed through Exposure of Multi-Walled Carbon Nanotubes to Hydrogen Plasmas	PNCC	Exhibit Hall A
Tuesday	8:30 AM	218a	Applications of a Micropyrolysis Index (MPI) towards Molecular Engineering of Fuels	Marriott	Salon D
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	3:15 PM	380a	The Elements of Sustainability	Loews	The Terrace Room
Wednesday	8:30 AM	449f	The Experience of Integrated Teaching and Learning Sustainability in Lamar University	Loews	Lescaze Room
Wednesday	12:30 PM	472f	Molecular Simulation of Pure and Mixture Gases Absorption In Ionic Liquids	Loews	Washington B Room
Wednesday	12:30 PM	511a	Sustainable Biofuel Production: A DOE Perspective	PNCC	Room 202-A
Wednesday	3:15 PM	542d	Developing a Sustainable Integrated Corn-Based Biorefinery	PNCC	Room 202-B
Wednesday	3:15 PM	542f	Life Cycle Assessment of Renewable Transportation Fuel Feedstocks	PNCC	Room 202-B
Wednesday	3:15 PM	542a	Life Cycle Assessment of Tallow-Based Renewable Diesel Fuel	PNCC	Room 202-B
Wednesday	3:15 PM	542b	Life Cycle Assessment of the Pyrolysis of Corn Stover into Green Gasoline and Green Diesel	PNCC	Room 202-B
Wednesday	6:00 PM	573y	A Simplified Approach to Aspen-Plus© Mass and Energy Balances for Preliminary Process Analysis and Economic Feasibility of Pyrolysis of Switchgrass to Bio-Oil	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573af	Biogas to Syngas Catalysis-Renewable Process for Fischer-Tropsch Liquid Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573k	Fractionation and Optimization of Switchgrass Pretreatment Via Cellulose-Solvent-Based Lignocellulose Fractionation (CSLF) at Lower Cellulase Loadings	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ab	Life Cycle Assessment of Bio-Oil Production by Pyrolysis of Wood	PNCC	Exhibit Hall A
Thursday	8:30 AM	583d	Impact of Oxygen Incorporation In Molecular Structure on Pyrolytic Soot Formation and Oxidizability	PNCC	Room 113-A
Thursday	8:30 AM	592b	Modeling of Fouling in Crude Oil Pre-Heat Trains to Reduce Energy Losses and Carbon Emissions	PNCC	Room 201-B
Thursday	12:30 PM	637d	Calculation of Greenhouse Gas Emissions	PNCC	Room 103-A
Thursday	12:30 PM	663a	Capturing the Business Value of Sustainable Performance In the Chemical Industry	Marriott	Room 502
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	663e	Sustainable Biodiesel Production. A Tool for Assessing and Improving the Sustainability of a Biodiesel Production Process	Marriott	Room 502
Thursday	3:15 PM	709c	An International Assessment of R&D In Simulation-Based Engineering and Science: Introduction	PNCC	Room 103-A
Thursday	3:15 PM	709a	International Study of R&D In Simulation-Based Engineering and Science: Overview and Executive Summary	PNCC	Room 103-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	709d	Simulation-Based Engineering and Science - Discussion	PNCC	Room 103-A
Thursday	3:15 PM	709b	Simulation-Based Engineering and Science: Materials Applications and Multiscale Modeling and Simulation for Materials, Energy and Life Sciences	PNCC	Room 103-A
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Friday	8:00 AM	747a	Carbon Neutrality In Chemical Process Design: The Pinch Design Concept and Options Trading Strategies	PNCC	Room 106-A/B
Friday	8:00 AM	733d	Peninsular Malaysia Operation Gas Fields Flow Network Optimization Model	PNCC	Room 202-B
Friday	8:00 AM	727a	Selective F-T Synthesis for the Production of Middle Distillates	PNCC	Room 104-B
Friday	10:30 AM	750c	Mathematical Models In Input-Output Analysis of Economic and Ecological Systems	PNCC	Room 106-A/B

OTHER GREENHOUSE GAS EMISSIONS

Day	Time	Paper #	Paper Title	Property	Room
Sunday	1:00 PM	5y	Classical Chemical Engineering Is Alive and Well	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ac	Enhanced CO ₂ Solubility In Aromatic and Alkyl Chain Substituted Imidazolium-Based Room Temperature Ionic Liquids	PNCC	Exhibit Hall A
Sunday	1:00 PM	5ah	Molecularly Engineered Nanoporous Adsorbents: Synthesis, Characterization, and Application	PNCC	Exhibit Hall A
Monday	8:30 AM	29d	Autothermal Reforming of Landfill Gases	PNCC	Room 103-A
Monday	8:30 AM	21g	Desulfurization of Refinery off-Gases for Hydrogen Production	PNCC	Room 203-A
Monday	8:30 AM	49a	Dual Function Inhibitors for Methane Hydrate	Marriott	Salon D
Monday	8:30 AM	21e	Hydrogen Production by CO ₂ Reforming of Methane Over Pdni Catalyst	PNCC	Room 203-A
Monday	12:30 PM	83a	Diffusion and Reaction in Catalytic Monolith Washcoat - Modeling Approaches	PNCC	Room 103-A
Monday	12:30 PM	117b	Effect of Calcium and Sodium Deposition on a Pemfc	PNCC	Exhibit Hall A
Monday	12:30 PM	83d	Effect of Urea and Urea Decomposition Byproducts on Zeolite Activity for Selective Catalytic Reduction	PNCC	Room 103-A
Monday	12:30 PM	85f	Experimental and Numerical Investigation of the Heat and Mass Transfer Enhancement for Dropwise Condensation In the Presence of Non-Condensable Gas	PNCC	Room 109-B
Monday	12:30 PM	83b	Exploring the Synergistic Performance of a Pt-Rh/ γ -Al ₂ O ₃ Catalyst for the Reduction of NO with H ₂	PNCC	Room 103-A
Monday	12:30 PM	107g	GlaxoSmithKline's Experiences with Life Cycle Assessment	PNCC	Room 204-C
Monday	12:30 PM	83e	Low Temperature Scr Activity Over MnOx/TiO ₂ Catalysts Prepared by Sol-Gel Method; Effect of Mn Loadings	PNCC	Room 103-A
Monday	12:30 PM	83f	N ₂ O and NH ₃ Formation Over Three-Way Catalytic Converters - the Effect of Low Sulfur Gasoline	PNCC	Room 103-A
Monday	12:30 PM	118a	Preliminary Design of Bioethanol Process Plants	PNCC	Exhibit Hall A
Monday	12:30 PM	69b	Properties of Algal-Based Biodiesel	PNCC	Room 106-B
Monday	12:30 PM	102a	Roles of Catalysts on Hydrogen Desorption of Mixtures of LiBH ₄ and MgH ₂ and Its Reversibility	Marriott	Franklin 10

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Monday	12:30 PM	80f	Shear Rheology and Microstructure of a Concentrated Short Glass Fiber-Filled Polybutylene Terephthalate (PBT)	PNCC	Room 202-A
Monday	3:00 PM	130a	Pt-Based Necklace and Other Low-Dimensional Nanostructures	PNCC	Room 303-A
Monday	3:15 PM	175b	Adsorption Processes - History and Recent Developments	Loews	Commonwealth B
Monday	3:15 PM	171a	Bifunctional Monolithic Catalysts for User Defined Fischer Tropsch Products	PNCC	Room 103-B
Monday	3:15 PM	156d	Bivariate Population Balance Model of Ethanol-Fueled Spray Combustors	PNCC	Room 109-B
Monday	3:15 PM	171b	Demonstration of the Loop Reactor Concept	PNCC	Room 103-B
Monday	3:15 PM	147d	Effect of Ceria on the Sulfation and Desulfation Behavior of Lean NO _x Trap Catalysts	PNCC	Room 103-A
Monday	3:15 PM	182e	Measuring and Modeling the Solubility, Diffusivity and Permeability of Carbon Dioxide in Polymers Used as Packing and Sealing Materials in Carbon Dioxide Refrigeration Plants	Marriott	Room 414/415
Monday	3:15 PM	184h	Molecular Chemisorption of O ₂ on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Monday	3:15 PM	147a	Optimization of Diesel Aftertreatment Catalysts and Systems Using Computer Modeling as a Tool	PNCC	Room 103-A
Monday	3:15 PM	180e	Regional and Global Perspectives of Megacity Air Pollution	Marriott	Franklin 6
Monday	3:15 PM	146f	Sludges-to-Ethanol as a Supplementary Unit In Kraft Paper Mill	PNCC	Room 106-B
Monday	3:15 PM	150c	The Environmental Impact of the Cooling Water System of the Iter Reactor	Marriott	Franklin 11
Monday	3:15 PM	150b	The Heat Rejection System of the Iter Reactor	Marriott	Franklin 11
Monday	3:15 PM	147c	The Influence of Pt Incorporation on NO _x Storage-Reduction Capacity of Nsr Monolith Catalysts	PNCC	Room 103-A
Monday	3:15 PM	133e	Virtual Learning Environment as a Conceptual Tool In Phase Equilibrium Course at Universiad De Los Andes	Marriott	Franklin 7
Monday	6:00 PM	185i	A Quantum Chemical Approach to Understanding How Gas Phase Conditions Affect the Thermodynamics and Kinetics of Oxidation Catalysis	PNCC	Exhibit Hall A
Monday	6:00 PM	188ab	Disperse Barium Oxide Nanoislands Synthesized on Aluminum Oxide by Successive Ionic Layer Deposition	PNCC	Exhibit Hall A
Monday	6:00 PM	186v	Turbulence Effects on Evaporation Rate-Controlled Spray Combustor Performance	PNCC	Exhibit Hall A
Tuesday	8:30 AM	218d	Application Vapor Dispersion Model of Natural Gas and Liquid Natural Gas (LNG) System to Estimate the Methane Gas Emission and Establish Correlation Between the Temperature and Concentration of the Dispersed Gas	Marriott	Salon D
Tuesday	8:30 AM	218e	Breakdown Mechanisms for Methyl-Esters	Marriott	Salon D
Tuesday	8:30 AM	197b	Computational Analysis of Yeast Xylose Metabolism	PNCC	Room 307-B
Tuesday	8:30 AM	215e	Life Cycle Assessment Coupled with Multi-Objective Optimization for Environmentally Conscious Planning of Energy Production Systems	PNCC	Room 203-A
Tuesday	8:30 AM	246a	Membrane Separation Techniques in the Continuous Fermentation and Separation of Butanol: Possible Applications of a Two-Step Process in a Biorefinery	Loews	Washington B Room
Tuesday	8:30 AM	227f	Physicochemical Denitrification Process for Drinking Water Resources at Ambient Conditions	Marriott	Salon K
Tuesday	8:30 AM	209c	Reaction-Relevant Gold Structures In Au-FeO _x Catalysts for the Water-Gas Shift Reaction	PNCC	Room 103-A
Tuesday	8:30 AM	202c	Simulation of Algal Growth In a Photobioreactor	PNCC	Room 113-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Tuesday	12:30 PM	259a	40 Years of Surface Science at Stanford: A Kinetic Perspective	Loews	Commonwealth B
Tuesday	12:30 PM	325a	A Hundred Year Historical View of Energy, An Essential Pillar for the Progress of Humanity	Marriott	Salon E
Tuesday	12:30 PM	290b	Analysis of Separation Methods for Isopropanol Recovery In the Celecoxib Process	PNCC	Room 106-A
Tuesday	12:30 PM	273c	Application of Radiation-Grafted Polymer Electrolyte Membrane to the Bunsen Reaction	Loews	Howe Room
Tuesday	12:30 PM	270g	Data-Driven Statistical Analysis of Global Climate Change	Marriott	Salon C
Tuesday	12:30 PM	311b	Effect of Pore Size, Open Metal Sites, and Functionalized Ligands on Adsorption of Small Molecules In Metal-Organic Frameworks	Marriott	Salon I
Tuesday	12:30 PM	270f	Environmental Foresight through Computational Chemistry: Improved Radiative Forcing Predictions for Global Warming Potentials	Marriott	Salon C
Tuesday	12:30 PM	267a	Impacts of New Technologies and Policies on Biofuels Production and Trade	PNCC	Room 113-B
Tuesday	12:30 PM	290e	Membrane Aided Reclamation of Waste Chemical Streams	PNCC	Room 106-A
Tuesday	12:30 PM	267b	Methane Gas Hydrate Equilibrium Inside Cylindrical Pores and Its Implications for Gas Production	PNCC	Room 113-B
Tuesday	12:30 PM	318d	Multi-Length Scale Structure of Segmented PEG-Based Ionomers	Marriott	Room 414/415
Tuesday	12:30 PM	267d	Novel Algal Photobioreactor Design and Operation for the Biofuels Industry	PNCC	Room 113-B
Tuesday	12:30 PM	291e	Past, Present, and Future of Gas to Liquids Technology	Loews	Washington C Room
Tuesday	12:30 PM	314b	Reaction Path Analysis of the Total Oxidation of Propane Over a CuO-CeO ₂ / -Al ₂ O ₃ Catalyst by Means of Temporal Analysis of Products (TAP)	PNCC	Room 102-B
Tuesday	12:30 PM	273e	Recent Progress In Catalyst Development for Hydrogen Production In the Sulfur-Iodine Thermochemical Water Splitting Cycle	Loews	Howe Room
Tuesday	12:30 PM	265d	Scrap Tires in Waste-to-Energy Plants: Treatment and Emission Control	Marriott	Salon D
Tuesday	12:30 PM	291f	The Challenges of Diminishing Natural Capital in the Transition to a Bio-Based Industry	Loews	Washington C Room
Tuesday	12:30 PM	316e	Trans-FREE Hydrogenation of Vegetable Fat in Vapor Phase Supercritical Modified CO ₂	PNCC	Room 204-C
Tuesday	12:30 PM	274a	Understanding Sulfur Poisoning and Carbon Deposition on Rh-Ni/Al ₂ O ₃ Catalysts during Steam Reforming of Logistic Fuels	PNCC	Room 103-A
Tuesday	3:15 PM	368b	Development of Solid Waste Landfills	Loews	Lescaze Room
Tuesday	3:15 PM	357f	In Situ Magnetic Separation and Immobilization of Rhodococcus Erythropolis LSSE8-1 for Dibenzothiophene Biodesulfurization	Marriott	Franklin 2
Tuesday	3:15 PM	343c	Modeling and Dynamic Simulation of An Industrial Natural Gas Processing Unit Considering Environmental and Economic Impacts	PNCC	Room 203-A
Tuesday	3:15 PM	380e	Sustainable Engineering: A Model for Engineering Education in the Twenty-First Century?	Loews	The Terrace Room
Tuesday	3:15 PM	380c	Sustainable Production and Consumption: The Role of Industry and the Consumer in Reducing Carbon Footprints	Loews	The Terrace Room
Tuesday	3:15 PM	380a	The Elements of Sustainability	Loews	The Terrace Room
Tuesday	3:15 PM	368c	The Evolution of Hazardous Waste Law and Regulation	Loews	Lescaze Room
Tuesday	3:15 PM	368a	Where Does It Go? a History of Solid Waste Disposal, Flow Control and Recycling	Loews	Lescaze Room
Wednesday	8:30 AM	394g	Biodiesel Process and Control	PNCC	Room 103-B

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday 8:30 AM	449d	Developing Capstone Design Projects That Include Sustainability, Environmental Impact and Life Cycle Assessments	Loews	Lescaze Room
Wednesday 8:30 AM	438b	Flare Minimization for Chemical Process Industry Sustainability	Loews	Washington A Room
Wednesday 8:30 AM	438e	Photocatalytic Concrete Slab for Passive NOx Pollution Control	Loews	Washington A Room
Wednesday 8:30 AM	442e	Preparation of Supported Nanoparticle Catalysts. A Molecularly-Engineered Route Based on Synthesis, Assembly and Activation	PNCC	Room 102-B
Wednesday 8:30 AM	442d	Reverse Micelle Synthesis of Bimetallic Catalysts	PNCC	Room 102-B
Wednesday 8:30 AM	452f	The Adsorption of Water on a PdO(101) Thin Film on Pd(111)	Loews	Commonwealth D
Wednesday 12:30 PM	490d	Adsorption of Sulfur Hexafluoride on Mcm-41: Predictions from Molecular Simulations	Marriott	Salon I
Wednesday 12:30 PM	471d	Cfd Simulation of Urea-Based Hybrid SnCr-Scr in a Pilot Scale Flow Reactor	PNCC	Room 203-A
Wednesday 12:30 PM	460a	Defining Enzyme Inhibitors for Cellulose Hydrolysis	PNCC	Room 202-B
Wednesday 12:30 PM	502b	Economic and Environmental Impact Assessment of Alpha-Naphthol Production by Traditional and Biocatalytic Routes	Loews	Washington A Room
Wednesday 12:30 PM	472e	Enhanced Solubility of CO2 In Aromatic and Alkyl Chain Substituted Imidazolium-Based Room Temperature Ionic Liquids	Loews	Washington B Room
Wednesday 12:30 PM	457d	Impact of Ultra-High Carbon Surface Areas on Capacitory and Battery Performance	PNCC	Room 103-B
Wednesday 12:30 PM	454c	Modeling the Ultrasonic Cavitation-Enhanced Removal of Nitric Oxide from Flue Gases In a Bubble Column Reactor	Marriott	Salon B
Wednesday 12:30 PM	508e	Nanoislands on Nanoislands: Controlling the Dispersion of Barium Oxide on Aluminum Oxide through Successive Ionic Layer Deposition	PNCC	Room 102-B
Wednesday 12:30 PM	454b	Optimization of the Ultrasonic Cavitation-Induced Removal of Nitric Oxide from Flue Gases Using Taguchi Statistical Experimental Design Methodology	Marriott	Salon B
Wednesday 12:30 PM	471c	Passivity Based Modeling and Control of Coal Power Plants	PNCC	Room 203-A
Wednesday 12:30 PM	515d	Phase Behavior and Applications of Ionic Liquid/compressed Refrigerant Gases (R-134a & CO2)	PNCC	Room 105-B
Wednesday 12:30 PM	460b	Production of Biofuels by Simultaneous Utilization of Mixed Sugars	PNCC	Room 202-B
Wednesday 12:30 PM	454a	Renewable Energy Technologies: A Veritable Tool for Empowering Rural Women	Marriott	Salon B
Wednesday 12:30 PM	468e	Representation of a Continuous Particle Size Distribution Using a New Polydisperse Kinetic Theory	Loews	Commonwealth B
Wednesday 12:30 PM	472g	Solubilities and Diffusivities of Carbon Dioxide In Ionic Liquids	Loews	Washington B Room
Wednesday 12:30 PM	511a	Sustainable Biofuel Production: A DOE Perspective	PNCC	Room 202-A
Wednesday 12:30 PM	511b	Sustainable Strategies for Biofuel Production	PNCC	Room 202-A
Wednesday 12:30 PM	486a	Toward the Reproducible Intrinsic Kinetic Measurement in Multi-Phase Microreactors	PNCC	Room 303-B
Wednesday 3:15 PM	542d	Developing a Sustainable Integrated Corn-Based Biorefinery	PNCC	Room 202-B
Wednesday 3:15 PM	563d	Experimental Kinetic Analysis of Steam and CO2 Gasification of Biomass Fuels	Loews	Lescaze Room
Wednesday 3:15 PM	552d	Heterogeneous and Homogeneous Mercury Speciation Under O2-CO2 Coal Combustion	Marriott	Salon D
Wednesday 3:15 PM	542f	Life Cycle Assessment of Renewable Transportation Fuel Feedstocks	PNCC	Room 202-B

Property Key

Loews = Loews Philadelphia Hotel

Marriott = Philadelphia Marriott Downtown

PNCC = Pennsylvania Convention Center



Wednesday	3:15 PM	542b	Life Cycle Assessment of the Pyrolysis of Corn Stover into Green Gasoline and Green Diesel	PNCC	Room 202-B
Wednesday	3:15 PM	552c	Modeling, Construction and Operation of An Integrated Pollutant Removal Process at An Oxy-Combustion Test Facility	Marriott	Salon D
Wednesday	3:15 PM	522b	Multi-Scale Modeling and Control of Particulate Cvd for Production of Solar Grade Silicon In Fluidized Beds	Loews	Congress B Room
Wednesday	3:15 PM	543e	Steam Reforming of Ethanol (SRE) In a Palladium Based Membrane Reactor Over Nickel Catalyst	Loews	Congress A Room
Wednesday	3:15 PM	538a	Water Problems In PEM Fuel Cells	PNCC	Room 113-C
Wednesday	6:00 PM	578b	A C.F.D.-Guided Mixed Integer Nonlinear Programming (MINLP) Model for Conceptual Design of a Carbothermic Aluminium Reactor	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575al	Adsorption and Reaction of Methanol on Ceria and Au-Ceria: Influence of Ceria Structure	PNCC	Exhibit Hall A
Wednesday	6:00 PM	571at	Anaerobic Treatment of Cattle Manure for Biogas Production	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573af	Biogas to Syngas Catalysis-Renewable Process for Fischer-Tropsch Liquid Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ac	Cellulase Production from Treated Lignocellulosic Agricultural Residues Supplemented with Paper Sludge	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578x	Development of Quantitative Structure-Property Relations for Ionic Liquids with Refrigerant Gases	PNCC	Exhibit Hall A
Wednesday	6:00 PM	577p	Dynamic Simulation for Best Performance of Multi-Stage Compression System during Plant Startup	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575as	Effect of Urea and Urea Decomposition Byproducts on Zeolite Activity for Scr	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575ai	Experimental Kinetic Analysis of CO ₂ and Steam Gasification of Biomass Fuels	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575az	Experimental and Modeling Studies of NO _x Storage and Reduction for a Diesel Exhaust In the Presence of H ₂ O and CO ₂	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573k	Fractionation and Optimization of Switchgrass Pretreatment Via Cellulose-Solvent-Based Lignocellulose Fractionation (CSLF) at Lower Cellulase Loadings	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578af	Gtl(Gas to Liquids) Process Optimization Simulation Study	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573w	Kinetics of Uncatalyzed Ethyl Esterification of Oleic Acid	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573ab	Life Cycle Assessment of Bio-Oil Production by Pyrolysis of Wood	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573o	Novel Cell Surface Display on Lactic Acid Bacteria and Its Application to Lactic Acid Production from Starchy Materials	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578f	Numerical Analysis of a Pilot-Scale Fixed Bed Reactor for Dimethyl Ether (DME) Synthesis	PNCC	Exhibit Hall A
Wednesday	6:00 PM	578aa	Numerical Modeling of Horizontal Wafering of Silicon Melts on a Molten Substrate	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575l	Quantitative Correlation Between the Acidity and the Catalytic Activity for the Methanol Dehydration	PNCC	Exhibit Hall A
Wednesday	6:00 PM	573n	Sporl for Robust Enzymatic Hydrolysis of Woody Biomass	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575b	Supported Catalysts in Heterogeneous Gas Phase Hydrogen Iodide Decomposition Reaction: A Screening Study	PNCC	Exhibit Hall A
Wednesday	6:00 PM	575z	Synthesis of Well-Defined Multilayer Catalyst Systems by Successive Ionic Layer Deposition	PNCC	Exhibit Hall A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Wednesday	6:00 PM	573i	Use of Immunolabeling to Study Changes in the Distribution of Xylan in the Plant Cell Wall to Better Understand the Process of Xylan Hydrolysis during Dilute Acid Pretreatment	PNCC	Exhibit Hall A
Thursday	8:30 AM	593e	A Monte Carlo Study of Molecular Selectivity of Binary Mixtures In Ordered and Disordered Microporous Carbon	Marriott	Salon I
Thursday	8:30 AM	589d	Alloyed and Intermetallic Platinum-Based Nanomaterials as Fuel Cell Catalysts	PNCC	Room 303-B
Thursday	8:30 AM	623b	Biomass Gasification in a Stoker Gasifier	PNCC	Room 204-A
Thursday	8:30 AM	582e	Carbon Dioxide Reforming of Methane to Synthesis Gas Over Nickel Incorporated Ni-Mcm-41 Catalysts	PNCC	Room 102-A
Thursday	8:30 AM	586c	Developing and Integrating Sustainable Chemical Processes into Existing Petro-Chemical Plant Complexes	Marriott	Room 502
Thursday	8:30 AM	617e	Effect of Liquid Hot Water Pretreatment on Switchgrass Hydrolysis	PNCC	Room 202-A
Thursday	8:30 AM	599b	Materials Characterization for High Temperature Solar Hydrogen Production	Loews	Howe Room
Thursday	8:30 AM	584f	Partial Oxidation of Ethanol Over Supported Ni Catalysts: Effect of Support	PNCC	Room 202-B
Thursday	8:30 AM	617c	Pretreatment of Switch Grass by Aqueous Ammonia	PNCC	Room 202-A
Thursday	8:30 AM	623a	Renewable Fuels Combustion Technologies	PNCC	Room 204-A
Thursday	12:30 PM	663a	Capturing the Business Value of Sustainable Performance In the Chemical Industry	Marriott	Room 502
Thursday	12:30 PM	637a	Climate Change Legislation and Litigation Update	PNCC	Room 103-A
Thursday	12:30 PM	637b	Climate Change Under the Clean Air Act	PNCC	Room 103-A
Thursday	12:30 PM	639e	Conversion of Lignocellulosic Sugars to Triacylglycerols: A Renewable Diesel Feedstock	PNCC	Room 203-A
Thursday	12:30 PM	664e	Efficient Sugar Release from Common Reed Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation at Lower Cellulase Loadings	PNCC	Room 202-A
Thursday	12:30 PM	634a	Gas Phase Processing of Sorbitol	PNCC	Room 113-A
Thursday	12:30 PM	637c	Greenhouse Gas Cap and Trade Programs: Moving Forward	PNCC	Room 103-A
Thursday	12:30 PM	645i	Measuring Vapor Liquid Equilibria of Sour Gases and Glycol Aqueous Solutions Using a Combined Static Technique	PNCC	Room 103-C
Thursday	12:30 PM	639d	Size Reduction Fundamentals for Biomass Conversion	PNCC	Room 203-A
Thursday	12:30 PM	626e	Systematic Methods for Process Synthesis and Design	PNCC	Room 109-B
Thursday	3:15 PM	694a	A Preliminary Physical-Chemical Analysis of Steam Reforming of Biogas from a Small Wastewater Treatment System of a University Campus	Loews	Howe Room
Thursday	3:15 PM	709c	An International Assessment of R&D In Simulation-Based Engineering and Science: Introduction	PNCC	Room 103-A
Thursday	3:15 PM	713f	Environmental Foresight through Computational Chemistry: Hydrofluoroethers and Potential Impacts	Marriott	Room 502
Thursday	3:15 PM	690g	Estimation of Parameters for the Bohart-Adams Model	PNCC	Room 111-B
Thursday	3:15 PM	702f	Frontal Flow Effects In 2-D Simulations of Orientation In High Aspect Ratio Particles Composites Made by Injection Molding	PNCC	Room 202-B
Thursday	3:15 PM	713c	Fuzzy Assessment of Corporate Sustainability	Marriott	Room 502
Thursday	3:15 PM	709a	International Study of R&D In Simulation-Based Engineering and Science: Overview and Executive Summary	PNCC	Room 103-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center



Thursday	3:15 PM	699c	Pd-Ag-Ni Ternary Alloy Membrane on Nickel Supported Substrate for High Temperature Hydrogen Separation: Introduction of TiO ₂ as a Diffusion Barrier	Loews	Congress B Room
Thursday	3:15 PM	689d	Production of Green Diesel by Hydrocracking of Canola Oil on Ni-Mo/ γ -Al ₂ O ₃ and Pt-Zeolite Based Catalysts	PNCC	Room 203-A
Thursday	3:15 PM	709d	Simulation-Based Engineering and Science - Discussion	PNCC	Room 103-A
Thursday	3:15 PM	709b	Simulation-Based Engineering and Science: Materials Applications and Multiscale Modeling and Simulation for Materials, Energy and Life Sciences	PNCC	Room 103-A
Thursday	3:15 PM	708e	Synthesis and Electrocatalytic Property of Platinum-Based Heteronanostructures	Marriott	Room 309/310
Thursday	6:00 PM	719ac	Enhancing Cellulose Accessibility to Cellulase of Various Feedstocks Pretreated by Cellulose-Solvent-Based Lignocellulose Fractionation	PNCC	Exhibit Hall A
Thursday	6:00 PM	719r	Investigation of the Ternary Mixture of Complex Hydrides for Hydrogen Storage Materials Development	PNCC	Exhibit Hall A
Thursday	6:00 PM	719aa	Metal-Organic Frameworks for Adsorption Separations	PNCC	Exhibit Hall A
Thursday	6:00 PM	718a	N ₂ O Production by Fungal Denitrification In a Semiarid Soil	PNCC	Exhibit Hall A
Thursday	6:00 PM	722av	Novel Organometallic Low Energy Gap Materials and Synthetic Models of Carbon Monoxide Hydrogenase (CODH) In Biological System	PNCC	Exhibit Hall A
Thursday	6:00 PM	722ap	Palm Oil Based Epoxides as Pvc Plasticizers: Synthesis, Characterization and Incorporation and Their Thermomechanical and Chemical Properties	PNCC	Exhibit Hall A
Thursday	6:00 PM	721j	Structured Adsorbent Bed for Rapid Adsorption and Regeneration Process	PNCC	Exhibit Hall A
Friday	8:00 AM	735a	Anomalous Self-Preservation of Surfactant-Derived Gas Hydrates at 1 Atm	PNCC	Room 109-B
Friday	8:00 AM	728a	Bioprocess Synthesis, Design and Analysis through a Group-Contribution Approach	PNCC	Room 203-B
Friday	8:00 AM	725b	Cellulase Production from Paper Mill Sludge by Trichoderma Reesei Rut C-30	Loews	Lescaze Room
Friday	8:00 AM	740e	Strong Shape/crystal Plane Effect of Nanoscale Ceria on the Activity of CeO ₂ -Based Catalysts for the Water-Gas Shift Reaction	PNCC	Room 102-A
Friday	10:30 AM	750c	Mathematical Models In Input-Output Analysis of Economic and Ecological Systems	PNCC	Room 106-A/B
Friday	10:45 AM	761b	A Comparative Study of the Gasification Technology Versus Traditional Combustion Technologies for Power Generation In México	PNCC	Room 202-B
Friday	10:45 AM	760f	An STM Study of High-Coverage Structures of Atomic Oxygen on Pt(111)	Marriott	Room 309/310
Friday	10:45 AM	766f	CO ₂ Fixation by Nanoscale Galvanic Couples	PNCC	Room 102-A
Friday	10:45 AM	761c	Cfd Modeling Gas-Solid Flows in Fcc Riser Reactors: Simulation Using Kinetic Theory in a Fully Developed Flow	PNCC	Room 202-B
Friday	10:45 AM	762e	Equilibrium Path Sampling Study of Methane Diffusion In Natural Gas Hydrates	PNCC	Room 103-A
Friday	10:45 AM	768f	Evidence for Hydrogen Spillover at Extremely Low Pressure for Pt- and Pd- Supported on Carbon Materials	PNCC	Room 111-B
Friday	10:45 AM	760b	Kinetic Modeling of NO Oxidation Over a Model Pt Catalyst	Marriott	Room 309/310
Friday	10:45 AM	757b	Naphthalene Steam Reforming Over Ni/Ce _{0.75} Zr _{0.25} -xMnxO ₂ (x = 0, 0.10, 0.20 and 0.25) Mixed Oxide Catalysts	PNCC	Room 202-A

Property Key

Loews = Loews Philadelphia Hotel
Marriott = Philadelphia Marriott Downtown
PNCC = Pennsylvania Convention Center

