 # 7 - Meet the Faculty Candidate Poster Session

Sunday, October 29, 2017 1:00 PM - 3:30 PM

Exhibit Hall B, Minneapolis Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
	Biomaterials & Biological Engineering			
0	Organizing Biochemical Reactions with Phase Separated Protein Droplets *in vitro* and *in vivo*	Huaiying	Zhang	7a
1	Designing Novel Surfaces to Control the Fate of Attached Microbes	Huan	Gu	7b
2	Kinetic of Biomass Fast Pyrolysis	Ali	Zolghadr	7d
3	Microbiome Engineering for Human Health and Agricultural Productivity	Collin M.	Timm	7e
4	Multi-Scale Cellular and Protein Therapeutic Engineering for the Development of Novel Immunotherapies	John	Blazeck	7f
5	Organ-on-a-Chip and 3D-Printing Technologies: Applications in Nephro-Cardiovascular Diseases	Stella	Alimperti	7g
6	Single Cell Analysis Using Droplet Microfluidics	Leqian	Liu	7h
7	Tissue-Engineered Models for Lymphatic and Blood Vascular Biology	Esak	Lee	7j
8	Understanding Bacterial Biofilms for Improved Medical and Industrial Processes	Erica	Ricker	7k
9	Biomaterial Design for Tissue Engineering, Drug/Gene Delivery and Biomedical Processes	Metin	Uz	7l
10	Creating Rechargeable Antithrombotic Surfaces for Medical Devices	Hyun Ok	Ham	7m
11	Creation of Self-Assembled Materials from Recombinant Fusion Proteins for Advanced Biomedical Platforms	Yeongseon	Jang	7n
12	Decoding the Nature-Designed Codes in Membranes: Applications in Biomedicines and Bioengineering	Amit Kumar	Sachan	7o
13	Engineering Functional Nucleic Acid Nano-Devices	Jeffrey	Vieregg	7p
14	Engineering Surfaces to Study Biological Interactions	Ariel	Furst	7q
15	Induction of Tolerance or Immunity by Targeting Antigens to Specific Antigen Presenting Cells via Synthetic Polymeric Glycosylations	Scott	Wilson	7r
16	Materials Design via Soft-Matter Crystallography	Julia	Dshemuchadse	7s
17	Molecular Understanding of Physical Phenomena in Soft Materials Design and Process Development	Qing	Shao	7t
18	Photoautotrophic Synthesis of Designer Polysaccharides	Cheryl	Immethun	7u
19	Production of Artificial Cell Membranes Bearing New Characteristics or Behaviors Using “Click” Chemistries	Danielle	Konetski	7v
20	Self-Organization in Soft, Active Materials	Kimberly L.	Weirich	7w

BOARD NUMBER	Title	First Name	Last Name	Paper Number
21	Tough Gradient Double Network Hydrogels for Artificial Implants	Pandiyarajan	Chinnayan Kannan	7x
22	Transcriptome-Guided Cell and Gene Therapy Strategies to Treat Neurodegeneration	Maroof M.	Adil	7y
23	Cancer Immunotherapy, Cell Imaging and Drug Delivery from Self-Assembled Structure	Jae-Ho	Lee	7z
24	Engineering Optical Nanomaterials for Biological Sensing and Imaging	Jackson Travis	Del Bonis-O'Donnell	7aa
25	Biopolymers Produced By a Thermophile *Geobacillus* sp. WSUCF1	Jia	Wang	7ab
26	Cell-Free Biotechnology for a Low-Carbon Future	Joseph	Rollin	7ac
27	Harnessing Diverse Microorganisms for Biochemical Production Using Carbon Dioxide	Jason T.	Boock	7ad
28	Streamlining Chemical Process Design with Process Systems Engineering Methods	Kefeng	Huang	7ae
29	Nano-Bio-Sensors for Point-of-Care Diagnostics	Sahar S.	Mahshid	7af
30	Novel Biosensors for Transformative Healthcare	Yunshan	Wang	7ag
31	Polymer Based Nano-Sensing Technology Platforms for Healthcare, Environmental Monitoring	Ramchander	Chepyala	7ah
32	Engineering Ligands to Control Protein Conformational Changes	Daniel R.	Woldring	7aj
33	Exploiting Organization in Bacteria for Synthetic Biology	Edward Y.	Kim	7al
34	Leveraging Big Data and Engineering Fundamentals Towards Rational Biological Discovery	Purushottam	Dixit	7am
35	Utilization of Lignocellulosic Biomass to Value-added Bio-products	Chang Geun	Yoo	7ix
36	Leveraging Physiological Microenvironment to Transport across Biological Barriers	Sufeng	Zhang	7iy
37	Methods for Efficient Sequence to Activity Mapping	Gur	Pines	7ja
38	Fundamental Molecular Biophysics, Rheology and Thermodynamics to Elucidate Protein Stability in Flow Fields and Protein-Protein Interactions in Concentrated Solutions	Jai A.	Pathak	7jf
39	Functional 2D Material Heterostructures and Bio-Interfacing for Sustainable Energy Generation	Sanjay	Behura	7jo

BOARD NUMBER	Title	First Name	Last Name	Paper Number
Biomedical Engineering				
40	Micro-Scale Transport Processes Enables Accelerated Biochemistry, Chaotic Mixing and Inexpensive Mobile Diagnostics	Aashish	Priye	7an
41	Complex Fluids in Complex Small Scale Geometries	Hamed	Haddadi	7ao
42	Design and Development of Ocular Disease Diagnostic System, and Point-of-Care Microsystem	Jae Hwan	Jung	7ap
43	Electrokinetic Analytical Tools for Cell Characterization and Biosensing Technology	Tayloria N.G.	Adams	7aq
44	Engineering Devices for Diagnostics, Therapeutics and Discovery Science	Suman	Bose	7ar
45	Engineering Vascularized Organ-on-Chip Systems to Advance Biological Understanding and Therapeutic Intervention in Human Cancer and Blood Stem Cell Biology	Duc-Huy	Nguyen	7as
46	Genetic Engineering of Immune Cell Recruitment to Control Inflammation	Alexander	Buffone	7at
47	Imran Rizvi, Ph.D. Assistant Professor, Department of Dermatology, Harvard Medical School; And Assistant Biomedical Engineer, Wellman Center for Photomedicine, Department of Dermatology, Massachusetts General Hospital	Imran	Rizvi	7au
48	Micro-/Nano-Fabrication and 3D-Bioprinting Technologies: An Engineering Approach Toward Translational Medicine	Pooya	Davoodi	7av
49	Stochasticity, Complexity, and Multiscale Dynamics in Cancer Progression and Drug Response	Leonard A.	Harris	7ax
50	Multiscale Multiphysics Modeling of Blood Clotting and Thrombus Biochemomechanics in the Vasculature	Alireza	Yazdani	7ay
51	Platform Technologies for Nucleic Acid-based Therapeutics	Jiahe	Li	7az
52	Microfabricated Devices for Drug Delivery and Tissue Engineering Applications	Kevin	McHugh	7jm
Metabolic Engineering				
53	Enabling C1-Based Bioconversion through Metabolic Engineering	Benjamin	Woolston	7ba
54	Engineering Metabolism for Carbon Conservation and Cellulosic Biofuel Production	Paul	Lin	7bb
55	From Integrative Metabolomics to Understanding Human Diseases and Enhancing CO_2 Fixation	Junyoung O.	Park	7bc
56	Selective Expansion of the Microbial Chemistry Repertoire for Metabolic and Protein Engineering	Aditya M.	Kunjapur	7be

BOARD NUMBER	Title	First Name	Last Name	Paper Number
Synthetic Biology				
57	Design of Synthetic C1 Carbon Assimilation Pathways	Hong	Yu	7bg
58	Genome- and Biome-Scale Microbial Engineering Using Synthetic Biology, Robotic Automation, and Mass Spectrometry Imaging	Tong	Si	7bh
59	Synthetic Biology for Next-Generation Plant Natural Product Discovery and Biosynthesis	Sijin	Li	7bi
60	Biosensor mediated evolution of biosynthetic pathways for biomanufacturing	Niju	Narayanan	7bz
Pharmaceuticals				
61	Developing Biologically Active Ionic Liquids for Therapeutic Applications	Wilmarie	Medina-Ramos	7bj
62	Pharmaceutical System Engineering	Ravendra	Singh	7bk
Particle Technology				
63	Programmable Soft Matter for Active Reconfiguration, Biotransport and Delivery	C. Wyatt	Shields	7bl
64	Synthesis of Core-Shell Microparticles Containing Thermoset Resins via Suspension Polymerization	Guozhen	Yang	7bm
65	The Mesoscopic Physics of Discrete Media: Towards the Control of Dynamic Structures	Victor	Francia	7bn

BOARD NUMBER	Title	First Name	Last Name	Paper Number
	Polymers			
66	Engineering Precision Polymers for Advanced Applications	Jimmy	Lawrence	7bo
67	Advanced Biologic-Synthetic Composites	Rachel A.	Letteri	7bp
68	Building New Materials and Electronics within Intact, Living Biological Systems: from Nanoelectronics through Polymeric Device to Genetically-Targeted Electronics	Jia	Liu	7bq
69	Deep Learning in Chemical Engineering	Amir	Barati Farimani	7br
70	From Soft Materials to Soft Circuits	Xiaoxue	Wang	7bt
71	Intrinsically Stretchable Skin Electronics for Wearable Biomedical Applications	Sihong	Wang	7bu
72	Molecular Simulations of Gas Transport in Polymer Membranes	Kai	Zhang	7bv
73	Electrically Conductive Nanomaterials and Their Multifunctional Polymeric Nanocomposites for Energy, Health, and Environment	Mohammad	Arjmand	7bw
74	Nanorheology of Entangled Polymer Melts	Ting	Ge	7bx
75	Polymer Process Design and Modelling to Fabricate and Understand Unique Composite Architectures	Alex M.	Jordan	7by
76	Programmable Assembly and Deformation of Polymers and Networks	Jinhye	Bae	7ca
77	Structure–Property Relationships in Polymer-Based Transistors	Seung Hyun	Sung	7cb
78	Three-Dimensional Responsive Soft Micro/Nano-Structures for Biomedical and Electronic Applications	Weinan	Xu	7cc
79	Modeling of Polymer Material Processing from Molecular Basis	Marat	Andreev	7js
	Materials			
80	Functional Materials Interfacing Chemistry and Biology	Weixia	Zhang	7cd
81	Plasmonic Perovskites Nanolasers in Accelerating Emission Dynamics	Sui	Yang	7ce
82	First-Principles Study for Detailed Understanding of Nanoporous Materials	Joshua D.	Howe	7cf
83	Colloidal Assemblies for Mesoscale Materials	Katherine	Phillips	7cg
84	Colloidal Fluids As Electrical Current Collectors	Jeffrey J.	Richards	7ch
85	Complex Fluids and Anisotropic Liquids for Molecular Engineering and Rational Material Design	Monirosadat	Sadati	7ci
86	Contorted Molecular Semiconductors for Organic Electronics	Yu	Zhong	7cj
87	Controlling the Dynamics of Soft Materials at Interfaces	Siddarth	Srinivasan	7ck
88	Design of Advance Materials by Using a*b initio* Structural Search	Irais	Valencia-Jaime	7cl

BOARD NUMBER	Title	First Name	Last Name	Paper Number
89	Engineered Porous Materials for Advanced Chemical Conversions: Understanding Structure-Property-Acitivty Relationship	Satish K.	Nune	7cn
90	Engineering Materials and Devices for Energy, Environment and Human Health: From Capillary Foams to Wearable Sensors and Implantable Neural Probes	Yi	Zhang	7co
91	Engineering Molecular Interactions in Biological and Electrochemical Interfaces	Matthew A.	Gebbie	7cp
92	Engineering Precision Polymers for Advanced Materials Applications	Amanda B.	Marciel	7cq
93	Fabrication of Functional Nanofibers and Hydrogels: Gelation Behavior and Viscoelasticity of Polymer Solutions	Tomoki	Maeda	7cr
94	Metallurgy-Mimic Thermal Processing and Morphology of Particle-Forming Diblock Copolymers	Kyungtae	Kim	7cs
95	Nuclear Spin Hyperpolarization for Characterization of Materials, Surfaces, and Interfaces	Jonathan	King	7ct
96	Porous Materials Chemistry for Catalysis and Separations	Simon H.	Pang	7cu
97	Self-Aligned Strategies for Printed Electronics	Woo Jin	Hyun	7cv
98	Socially-Responsible Hybrid Materials: From Molecular Engineering to Practical Applications	Nader	Taheri Qazvini	7cx
99	Synthesis of Crumpled Graphene-Based Materials Using Aerosol Techniques and Their Application to CO_2 Photoreduction	Yao	Nie	7cy
100	Targeted Design of Next-Generation Materials	Hadi	Ramezani-Dakhel	7cz
101	The Crystal Quality and Structure of AM-6	Rumeysa	Tekin	7da
102	Theoretical and Computational Study of Soft Matter Systems: From Classical Challenges to Rational Design of New Materials	Rui	Wang	7db
103	Vapor-Phase Deposition for Functional Metal-Organic Framework (MOF) and Polymer Thin Films	Junjie	Zhao	7dc
104	Computational Design of Surfaces and Nanostructures for Energy Applications	Matthew M.	Montemore	7dd
105	Experimental Interrogation of Polymer Material Structure-Property Relationships	Richard	Sheridan	7jc
106	Towards Stronger and Smarter Materials via the Hybridization and Engineering of Dimensionality and Topology	Pingwei	Liu	7jn
107	Synthesis and Characterization of Novel Hierarchical Porous Materials with Functional Properties	Antoni	Forner-Cuenca	7jq
108	Self-Assembly, Elasticity, and Rheology of Soft Materials	Rodrigo	Guerra	7jt

BOARD NUMBER	Title	First Name	Last Name	Paper Number
	Nanomaterials & Nanotechnology			
109	A Marriage of Convenience: Uniting Polymer Chemistry and Polymer Physics to Craft Advanced, Functional Materials	Robert C.	Ferrier	7de
110	Beyond Graphene: Two-Dimensional Transition Metal Carbides and Nitrides (MXenes)	Mengqiang	Zhao	7df
111	Biomolecular Sensing Using Fluorescent Single Wall Carbon Nanotubes	Juyao	Dong	7dg
112	Interaction of Nanostructures Leads to Macroscopic Behaviors: Towards Designing Multiple-Component Nanostructures with Functionalities for Energy-Related Applications	Fen	Qiu	7dh
113	Light and Heat-Managing Nanomaterial for Energy Efficiency and Human Health	Po-Chun	Hsu	7di
114	Multiscale Design of Heterogeneous Nanomaterials for Energy Applications: Solution Synthesis, Structures, and Properties	Haoran	Yang	7dj
115	Rational Materials Design for Energy and Heterogeneous Catalysis Applications: Noble Metal Single Atom Catalysts and 1D Nano-Array Support Materials	Son	Hoang	7dk
116	Smart Magnetic Nanomaterials for Sustainable Applications in Biomedicine and Catalysis	Ayomi S.	Perera	7dl
117	Solution Processable Multicomponent Nanomaterial for Next Generation Transparent Electronic/Optoelectronic Devices	Ajay	Singh	7dm
118	Ubiquitous Energy Harvesting through Chemically Engineered 2D Materials	Xu	Zhang	7do
119	Understanding and Controlling Interfaces of Nanomaterials Via Electrochemistry	Tuncay	Ozel	7dp
120	Directed Self-Assembly of Blue Phases Single Crystal By Chemically Patterned Surfaces	Xiao	Li	7dq
121	Multifunctional Soft-Nano Interfaces for Energy, Environment, and Healthcare	Kunal	Mondal	7dr
122	Advanced Materials and Nanotechnologies for Water-Energy Applications	Chong	Liu	7ds
123	Multiscale Design of Aerosol Synthesis of Nanomaterials	Eirini	Goudeli	7du
124	Nano Material Based Protein Sensor Design for Complex Cellular Environments By a Fast Integrated Simulation System.	Shuai	Wei	7dv
125	Optimizing Polymeric Nanoparticle Synthesis for Drug Delivery Using Experimental Design	Amber C.	Jerke	7dw

BOARD NUMBER	Title	First Name	Last Name	Paper Number
126	Sustainability through Nanoscience: Green, Smart, and Controllable Synthesis and Characterization of One-Dimensional Metal Nanostructures	Shohreh	Hemmati	7dy
127	Wearable/Implantable Ultrathin Electronic/Optoelectronic Devices with Engineered Semiconductor Nanocrystals	Hyeong Jin	Yun	7dz
128	Plasma Biomedicine and Plasma-Fabricated Nanomaterials for Energy, Health, and Electronics	Daniel	Elg	7ji
129	Chemically-Modified Biomolecules & Nanosystems to Sense & Modulate Biology	P. K.	Jain	7jr
	Catalysis			
600	A Holisitic Design Approach for Zeolite Catalysts	Florian	Göltl	7eb
601	Catalysis for Energy: Catalyst Design Based on Spectroscopy and Fundamental Structure-Function Relationships	Konstantinos A.	Goulas	7ec
602	Computational Driven Strategies for the Rational Design of Novel Catalysts for Clean Energy Generation and Fuel Synthesis	Shyam	Kattel	7ee
603	Data Driven Catalyst Design and Optimization	Yongchun	Hong	7ef
604	Designing Multicomponent Nanostructured Materials for Energy Storage and Conversion	Gregory S.	Hutchings	7eg
605	Developing Fundamental Insights into Heterogeneous Catalytic Reactions for Selective Chemical Production and Sustainable Fuels	Matthew	Kale	7eh
606	Efficient Catalytic Pathways for Carbon Utilization and Emission Control Technologies	Erdem	Sasmaz	7ei
607	Enabling New Reaction Pathways through Creation of Tailored Molecular Sieve Catalysts	Viktor J.	Cybulskis	7ej
608	Enhanced Catalytic Capability through Controlled Reaction Environments: A Merger of Solvent Effects and Rational Catalyst Design	Omar A.	Abdelrahman	7ek
609	Enhanced Stability for Propene Epoxidation with H_2 and O_2 on Au Catalysts Supported on Nanosheets TS-1	Nan	Sheng	7el
610	Explaining Surface-Catalyzed Reactions in Electrochemistry	Eric	Walker	7em
611	Insight and Applications of Pt-Bi Bimetallic Catalysts: A Combined Experimental and DFT Study	Yang	Xiao	7en
612	Integrating Computational Chemistry Techniques to Understand Complex Chemical Reactions	Tibor	Szilvási	7eo
613	Integration of Machine-Learning and Data Management Methods for Accelerated Catalyst Modeling and Exploration	Jacob R.	Boes	7ep
614	Magnetic Polymer Nanocomposites for Giant Magnetoresistance and Electromagnetic Shielding	Jiang	Guo	7eq

BOARD NUMBER	Title	First Name	Last Name	Paper Number
615	Making Renewables Chemicals and Biofuels Economical: Toward Complete Utilization of Lignocellulosic Biomass	David	Martin Alonso	7er
616	Mechanisms of Heterogeneous Catalysis for Clean Energy Conversion and Efficient Chemical Production	Luke	Neal	7es
617	Modification of Nickel-Based Catalysts for the Dry Reforming of Methane By Atomic Layer Deposition	Patrick	Littlewood	7et
618	Molecular Modelling for Catalytic Reaction Engineering	Jithin John	Varghese	7eu
619	Nanoscale Engineering of Electrocatalysts Using Atomistic Modeling	Joseph H.	Montoya	7ev
620	Novel Approaches for Carbon Neutral Energy Conversion	Zhi	Cao	7ew
621	Rational Design of Material Interfaces for Electrochemical Energy Conversion and Storage	Ming	Gong	7ex
622	Renewable Bulk Chemicals Production Using Porous Catalytic Materials: A Mechanistic Perspective	Sha	Li	7ey
623	Solar Energy Conversion Via Photovoltaics and Photocatalysis	Won Jun	Jo	7ez
624	Structure-Function Relations in Bifunctional Catalysis: Kinetic, Spectroscopic, and Theoretical Approaches	Gina	Noh	7fa
625	Supported Molybdenum Dio-Oxo Catalysts for Acceptorless Aqueous Alcohol Dehydrogenation	Tracy	Lohr	7fb
626	Surface Interactions of High Performance Materials for Energy Efficient Technologies	Zenda D.	Davis	7fc
627	Synthesis of Organometallic Single-Site Heterogeneous Catalysts for Sustainable Chemistry	Jacob	Heltzel	7fd
628	Understanding and Improving Heterogeneous Catalysis for Sustainable Production of Renewable Fuels and Chemicals	Jiayue	He	7ff
629	Structure-Function Correlations of Nanomaterials in Heterogeneous Catalysis	Weiqing	Zheng	7fh
630	Advanced Functional Porous Materials As Heterogeneous Catalysts	Masoudeh	Ahmadi	7fi
631	Mechanistic, Spectroscopic and Theoretical Assessment of Porous Catalytic Materials	Michele L.	Sarazen	7fs

BOARD NUMBER	Title	First Name	Last Name	Paper Number
	Electrochemistry			
632	Designing Solid-Liquid Interphases and Polymer Composite Networks for Energy Storage and Carbon Capture	Snehashis	Choudhury	7fj
633	Electrodeposition-Based Additive Manufacturing: Combining Bipolar Electrochemistry with Scanning Probe Methodology for Freeform Fabrication	Trevor M	Braun	7fk
634	Engineering the Next-Generation of Electrochemical Energy Storage	Kevin	Knehr	7fl
635	Stable Electrochemical Growth in Viscoelastic Electrolyte	Shuya	Wei	7fm
636	Designing Electrochemical Surfaces and Interfaces for Catalysis, Separation Membranes, and Sensors	Jesse D.	Benck	7fn
637	Understanding and Controlling Electro-Chemo-Mechanical Phenomena in Advanced Materials for Energy Storage & Harvesting	Ömer Özgür	Çapraz	7jl
	Separations			
638	Adsorption of Copper and Nickel from Wastewater in Fixed Bed Using Bentonite Clay	Saad	Aljlil	7fo
639	Investigating Kinetics Under Extremely-Harsh Conditions for Energy and Food Processing	Xiao-Yu	Wu	7fp
640	Molecule Separation and Conversion Using Novel Porous Material	Jian	Liu	7fq
641	Applying CVD Polymers in Membrane Separation, Biomedical Devices and Soft Electronics	Minghui	Wang	7fr
642	Membrane Separations for Clean Energy Conversions	Simona	Liguori	7ft
643	Membranes As Phase Contactors and Catalytic Interfaces	John P.	Stanford	7fu
644	Nanoporous Ultrathin Skinned Hollow Fiber Membranes	Chen	Zhang	7fv
645	Microporous Inorganic and Composite Membranes for Energy Efficient Separations	Xiaoli	Ma	7fw
646	Molecular Design of Redox-Active Electrochemical Interfaces: Selective Separations and Beyond	Xiao	Su	7fx
647	Bio-Mimetic Membranes for Energy Efficient Clean Water Processes	Steven	Weinman	7fy

BOARD NUMBER	Title	First Name	Last Name	Paper Number
	Energy & Sustainability			
648	Renewable Transportation Biofuel and Value-Added Chemical Production from Wet Biowaste	Wan-Ting	Chen	7fz
649	Metal Oxide Redox Materials for Energy Applications	Peter	Kreider	7ga
650	Atomistic Modeling of Energy Storage Materials	Jeffrey S.	Lowe	7gc
651	Convergence As a Chemical Engineering Career	Cory	Jensen	7gd
652	Developing Energy Materials through New Material Synthesis and Advanced Optoelectronic Characterization	Charles J.	Hages	7ge
653	From Fundamental Understanding Towards Materials Design of High Energy Battery Materials	Yuzhang	Li	7gf
654	Investigation and Implementation of Adsorption Models in Nuclear Energy	Austin	Ladshaw	7gg
655	Mechanical Principles of Biofilm Formation	Jing	Yan	7gh
656	Multi-Level Systems Modeling	Emre	Gençer	7gi
657	Ion Transport in Charged Porous Media: From Porous Electrodes to Geological Flows	Mohammad	Mirzadeh	7gj
658	Modeling of Light-Driven Heterogeneous Catalysis and Other Excited-State Processes at the Nanoscale	John Mark P.	Martirez	7gk
659	Transitional Solutions Towards Decarbonized Economy	Mohammad S.	Masnadi	7gl
660	Pore-Level Multiscale Simulation of SAGD	Peyman	Mohammadmoradi	7gm
661	Screening Improved Recovery Methods in Tight-OIL Formations By Injecting and Producing through Fractures	Harpreet	Singh	7go
662	Aerosol Synthesis of Materials for Sunlight Harvesting Applications	Shalinee	Kavadiya	7gp
663	Harvesting, Coversion, and Direct Utilization of Solar Energy	Umar	Aslam	7gq
664	Solution Processed Optoelectronics. Materials to Devices	Jeffrey A.	Christians	7gr
665	Integrated Modeling for Solutions in Carbon Management	Peter C.	Psarras	7gs
666	Hydrogeoxygenation of Long-Carbon Oxygenates to Jet and Diesel Fuels: Probing the Reaction Network	Saikat	Dutta	7iz
667	Reinforced anion exchange membrane (AEM) Separators Based on Triblock Copolymers for Electrode-decoupled redox flow batteries (RFBs)	Shrihari	Sankarasubramanian	7jk
668	Energy Management and Sustainability in Chemical Engineering and Beyond	Farhad	Fazlollahi	7jh
669	Techno-Economic and Life Cycle Analysis of the Renewable Energy Conversion Pathways	Wenqin	Li	7jp
670	High-Performance Energy Storage and Conversion Devices for Automotive Electrification through A2P Approach	Qiangfeng	Xiao	7ju

BOARD NUMBER	Title	First Name	Last Name	Paper Number
Process Design, Development, & Control				
671	Advanced Control for Next-Generation Materials Synthesis and Smart Manufacturing	Joel	Paulson	7gv
672	Data Driven Modeling and Control for Engineering Next-Generation Processes	Robert J.	Lovelett	7gw
673	Discrete and Hybrid Dynamics, Cyber-Physical Systems, and Formal Methods in Chemical Engineering	Blake C.	Rawlings	7gx
674	Novel Strategies for Quantification of Model Uncertainty and Real-Time Optimization of Batch Operations	Francesco	Rossi	7gy
675	Development and Assessment of New Processes for the Production of Bio-Products	Sampath	Gunukula	7gz
676	Investigating Continuous Biochemical Processing Strategies Utilizing Process Systems Engineering Fundamentals	Jonathan P.	Raftery	7ha
677	Process Systems Engineering in Pharmaceutical Process Development	Qinglin	Su	7hb
678	Process Systems Engineering Methods in the Design and Optimization of Biorefineries and the Supply Chain	Athanassios	Nikolakopoulos	7hc
679	Scientific Computing and Mathematical Modelling for Multiscale Nonlinear Systems	Amir	Akbari	7hd
Thermodynamics				
680	Chemical Thermodynamics of Aqueous Atmospheric Aerosols: Modeling and Microfluidic Measurements	Lucy	Nandy	7he
681	Molecular Modeling and Simulation for Energy, Environment and Life Science	Hao	Jiang	7hf
682	Solvation Behavior of Self-Assembled Systems: Investigating the Colloidal Interface Via Molecular Simulations	Kevin R.	Hinkle	7hg
Fluid Mechanics				
683	Chemistry and Physics of Biological Fluids on the Mesoscopic Scale	Jesper J.	Madsen	7hi
684	Interfacial Transport Phenomena with Applications to the Environment and Human Health	Jie	Feng	7hj
685	Modeling Liquid Crystals, Active Matter and Other Non-Equilibrium and Nonlinear Soft Materials	Rui	Zhang	7hl
686	Multiphase Interactions to Create Designer Material	Sara	Moghtadernejad	7hm
687	Spherically Confined Colloidal Suspensions of Hydrodynamically Interacting Particles: A Model for Intracellular Transport	Christian	Aponte-Rivera	7hn

BOARD NUMBER	Title	First Name	Last Name	Paper Number
	Interfacial & Transport Phenomena			
688	Computational and Experimental Investigation of Membrane Biomechanics	Manuela A.A.	Ayee	7ho
689	Controlling and Characterizing Complex Fluid-Fluid Interfaces	Javen	Weston	7hp
690	Engineering Metal Surfaces Via Electrochemical Reactions for Advanced Functionalities	Won Tae	Choi	7hq
691	Explore Colloidal and Interfacial Phenomena in Complex Fluids: From Isolated Fluid Particles to Their Close Packing Structures	Nan	Shi	7hr
692	Tailoring Functionality from Disorder : Complex Nonequilibrium Phenomena at Biological and Nanomaterial Interfaces	Alexander J.	Pak	7hs
693	Computational Micro/Nanofluidics	Xikai	Jiang	7ht
694	Imaging the Structure and Dynamics of Soft Materials	Yi	Peng	7hu
695	*In silico* Design of Ionic Liquid Adducts for Biomedical and Electrochemical Applications	Fardin	Khabaz	7hv
696	Modeling across Disparate Spatiotemporal Scales – Enabling Answers to Grand Engineering Challenges	Dwaipayan	Dasgupta	7hw
697	Spin-Segregation of Active Spinners	Somayeh	Farhadi	7hx
698	Application of Ultrasound for Synthesis of Carbon Capture Microcapsules	Srinivas	Mettu	7hy
699	Curvature Matters. Reconfigurable Materials from Anisotropic Colloid Interactions	Isaac	Torres-Diaz	7hz
700	Colloidal and Interfacial Phenomena Involving Anisotropic Fluid	Xiaoguang	Wang	7jb
	Computation & Modeling			
701	Computational Design and Discovery of Materials	Yamil J.	Colón	7ia
702	Computational Modeling of Catalytic Reactions and Nanomaterials: Mechanisms and Structure-Function Relationships	Wei	Lin	7ib
703	Correlating Structure and Performance of Heterostrcuted Materials for Energy Generation and Storage	Liang	Zhang	7ic
704	Materials and Methods for Sustainable CO_2 Conversion Towards Hydrocarbon Generation	Debtanu	Maiti	7id
705	Molecular Modeling and Machine Learning for Catalysis and Separations	Tyler R.	Josephson	7ie
706	Molecular Modeling of Anti-Microbial Peptides at Water-Membrane Interface	Faramarz	Joodaki	7if
707	Multi-Scale Modeling of Liquid Solutions and Solid/Liquid Interfaces	Nav Nidhi	Rajput	7ig

BOARD NUMBER	Title	First Name	Last Name	Paper Number
708	Multiscale Simulations of Nonequilibrium Mechanisms in Aqueous Solutions	Aviel	Chaimovich	7ih
709	Predictive Bottom-up Design of Nanomaterials for Biomimicking Applications	Trung	Nguyen	7ii
710	Wave Function-Based Framework for Computational Catalyst Discovery	Alexander V.	Mironenko	7ij
711	Data Analytics for Complex Systems	Kristen	Severson	7ik
712	Dynamic Systems Spanning Engineering to Medicine	Anwesha	Chaudhury	7il
713	Global Optimization Techniques for System Identification and Green Engineering Applications	Jeremy A.	Conner	7im
714	Multi-Physics Modeling and Parallel Computing in Biological Flows	Jifu	Tan	7in
715	Multi-Scale Optimization in Process Systems Engineering	John P.	Eason	7io
716	Multiscale Processes Intensification and Optimization of Process Systems	Flavio	da Cruz	7ip
717	Optimization-Based Control of Complex Process Networks: Application to Medicine and Energy Systems	Davood	Babaei Pourkargar	7iq
718	Process Systems Engineering for Transforming Industrial Flares into a Source of Energy By Managing Uncertain Abnormal Situation	Monzure-Khoda	Kazi	7ir
719	Computational Design and Characterization of Nanoscale Materials for Energy Applications	N. Scott	Bobbitt	7it
720	Level Set Algorithms for Polymer Field Theory	Gaddiel	Ouaknin	7jd
721	Fundamental Studies and Engineering Modeling of Industrially Relevant Systems	Aseel M.	Bala	7je
722	Transport Properties of Polymers and Nanoparticles having Complex Mor-phologies: A Computational Modeling Study	Fernando	Vargas-Lara	7jg
723	High-Performance Computing Approaches to Large-Scale Stochastic Programming and Data Analysis	Yankai	Cao	7iu
	Education			
724	Water/Solute Permselectivity Limits of Biomimetic Desalination Membranes	Jay	Werber	7iv
725	Conducting Flow-Induced Crystallization Studies on Flexible and Semi-Rigid Polymers: A Facilitator of Education in Polymer Physics	Behzad	Nazari	7iw