

169 - Poster Session: Computational Molecular Science and Engineering Forum

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
1	Discovery of New Surfactants Used in Firefighting Foams By Active Learning	Xin	Wang	709g
2	Exploring Effective Design Strategies in Fine-Tuning the Electronic, Transport, and Photophysical Properties in Cofs	Yuanhui	Pan	169a
3	Data Set and Data-Driven Models for Predicting Metal-Organic Framework Stability in Water and Harsh Environments	Gianmarco	Terrones	169b
4	Prediction of pK_a in Different Solvents Via Deep Learning	Jonathan	Zheng	169c
5	Exploring the Role of Functional Groups and Nanoconfinement on the Structural and Dynamical Properties of Water and Ions inside Metal-Organic Frameworks	Akash	Ball	169d
6	Integrating Off-Lattice Kinetic Monte Carlo with Molecular Dynamics for Modeling Polyvinyl Chloride Dehydrochlorination	Feranmi	Olowookere	169e
7	Utilizing an Integrated Experimental and <i>in silico</i> Approach to Engineer Cross Reactive Antibodies Against VEGFA and PIGF2 in Pediatric Glioblastoma	Emma C.	Aldrich	169f
8	Evaluating Suitability of the Chimes Machine-Learned Interatomic Model for Zeolite Materials	Sayed Ahmad	Almohri	169g
9	Computational and Experimental Studies of Hydrophobic, Nonaqueous, Nonvolatile, Low Viscous, and High CO ₂ Absorption Chemical Solvents	Wei	Shi	169h
10	Studying Depolymerization of Polyurethanes Using Reaction-Aware Deep-Learning Potentials	Lakshmi Yasodhara	Ananthabhotla	169i
11	Computational Modeling and Design of Self-Stratifying Colloidal Materials	Mayukh	Kundu	169k
12	The Tradeoff between Chemical Accuracy and Computational Cost: An Assessment of Thermochemical Prediction with Density Functional Theory	Rebecca	Walters	169l
13	Using ML to Determine the Optimal Set of Operational Parameters of the RO System in a Regional Water Treatment Plant	Arash	Tayyebi	169m
14	Surface-Centered Approach for Characterization and Prediction of Protein-Membrane Interactions	ByungUk	Park	169n
15	Multimodal Language and Graph Learning of Adsorption Energy Prediction	Janghoon	Ock	169o
16	Ligand Lipophilicity and Architecture Influence Mechanisms and Thermodynamics of Nanoparticle Adsorption to Lipid Bilayers	Carlos	Huang-Zhu	169p
17	Transferable Water Potentials Using Equivariant Machine Learning Interatomic Potentials	Tristan	Maxson	169t
18	Direct Simulation of Supported Ag Nanoparticles Via Machine Learning Interatomic Potentials	Tristan	Maxson	169bx
19	Investigating Phase Separation Behavior of Multi-Domain and Intrinsically Disordered Proteins with a Coarse-Grained Model.	Arjun	Singh	169q
20	Molecular Dynamics Simulations of Lipid Bilayer Mixtures: Developing Liposomes with Optimal Mechanical Properties	Stephen	Adepoju	169r
21	Dipole Moment Predictions Using Machine Learning Electron Density Models	Siddarth	Achar	169s
22	Perdew-Zunger Self-Interaction Correction for Ionization Energies of Transition Metal Atoms	Priyanka Bholanath	Shukla	169u
23	Density Functional Theory (DFT) Analysis of CO ₂ Adsorption and Dissociation on Reducible Oxides, and Integration into a Microkinetic Model for Dry Reforming of Methane (DRM)	Nirenjan Shenoy	Padmanabha Naveen	169v
24	Modeling the Effect of Surface Tension and Neutral Lipid Mixtures on the Structure of Lipid Monolayer Interfaces	Oluwatoyin	Campbell	169w
25	Generalizability of Machine Learning Derived Interatomic Potentials of Peptides and Isomeric Structures	Lejla	Biberic	169x

169 - Poster Session: Computational Molecular Science and Engineering Forum

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
26	Li Ion Diffusion in Solid Electrolyte Analyzed Using Deep Generative Models: Dependence of Accuracy of Diffusion Coefficients on MD Data Length.	Hiroya	Nitta	169y
27	Exploration of PHA Synthase Mechanism through QM/MM Simulations	Youngbi	Kim	169z
28	A High-Throughput Screening Study to Design Ultra-High Performance Aramid Copolymers	Hyeonsuk	Yoo	169aa
29	Integrating Biophysical Modeling and Machine Learning to Discover Plastic-Binding Peptides for Microplastic Remediation	Michael	Bergman	169ab
30	Active Learning of Density Functionals with Error Control	Runtong	Pan	169ac
31	Customized Random Heteropolymer Design to Improve Protein Stability Using Molecular Dynamics Simulations	Yinhao	Jia	169ad
32	Molecular Dynamics Simulations of the Tear Film Lipid Layer to Elucidate the Causes of Dry Eye Syndrome	Mahbuba	Khanom	169ae
33	Modeling H-D Exchange in Supported Catalytically Active Liquid Metal Solutions Using Reactive Molecular Dynamics	Gunnar	Sly	169af
34	Enhanced Shockwave Synthesis through Accurate Silicon Modeling Using Chimes	Thomas	Sundberg	169ag
35	Uncovering Residue-Level Driving Forces Underlying the Formation of Biomolecular Condensates	Shiv	Rekhi	169ah
36	A Synergy of Molecular Simulation, Mathematical Programming, and Machine Learning for the Phaseout of Harmful Refrigerants	Barnabas	Agbodekhe	169ai
37	Evaluation of Effective Dielectric Constants: Implications for Modeling Protein-DNA Liquid-Liquid Phase Separation	Vithurshan	Varenthirarajah	169am
38	Force Field Development for Pyrrolidinium-Based Ionic Liquids for Ionic Conductivity Predictions	Ashutosh Kumar	Verma	169an
39	Permutationally Invariant Network for Enhanced Sampling (PINES): A General Approach to Treating Identical Particles and Constructing Targeted CVs with Machine Learning	Nicholas	Herringer	169ao
40	Atomic-Level Structural Model of Helical Tdp-43 Oligomers	Azamat	Rizuan	169ap
42	Capturing Realistic Double Layer Cation Properties in Classical MD Using Aimd-Guided Potential Fitting	Derek	Zhu	169ar
43	Adsorbate Effects on the Mobility of Single Atom Catalysts: Using DFT to Map out Diffusion Potential Energy Surfaces	Shirin	Asadialahsavand	169as
44	Parametrization of Monatomic Ion-Biomolecular Interactions in the Polarizable Drude Force Field: Application in Protein and Nucleic Acid Systems	Yiling	Nan	169at
45	Comparison of Selective Metabolite Permeability across Bacterial Microcompartment Species Using All-Atom Molecular Dynamics and Enhanced Sampling	Evan M.	Okolovitch	169au
46	Tackling Energy Conversion Challenges through Simulations in Synergy with Experiments	Ritesh	Kumar	169av
47	Elucidating Gas Diffusion Dynamics at the MOF-Polymer Interface in Mixed-Matrix Membranes: A Computational Study	Moein	Hajian Z.D.	169aw
48	Using Deep Learning to Accelerate the Molecular Simulations and Predict the Kinetics of RNA Folding	Ayush	Gupta	169ax
49	Understanding Plasma-Driven Solution Electrochemistry	Subhajyoti	Chaudhuri	169ay
50	Examining Ion Dehydration Mechanisms at the High Pressures and Concentrations Required for Desalination	Nathanael	Schwindt	169az
51	Physical Simulations of Genome Organization and the Histone Code	Soren	Kyhl	169ba
52	Uncertainty Quantification Methods for Machine Learning Guided Data Selection	Khash	Rafei	169bb
53	Origin of the Stokes-Einstein Deviation in Liquid Al-Si	Ni	Zhan	169bc
54	Transcriptomic and Metabolomic Integration of Tributyltin-Exposed Adipocytes Reveals Associations with Neurological Disorders	Dayna	Schultz	169bd

169 - Poster Session: Computational Molecular Science and Engineering Forum

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
55	Modeling Ionic and Sequence Effects on the Swelling Behavior of Polyampholyte Brushes	Jianzhong	Wu	169bf
56	Can Classical Nucleation Theory Describe Heterogeneous Crystal Nucleation on Non-Uniform Surfaces?	Fernanda	Vargas	169bg
57	Computational Investigation of Reaction Coordinate Optimality for Ice Nucleation Studies	Kimia	Sinaeian	169bh
58	Hydration Free Energies of Linear Alkanes (C1-C20) and Surfactants in Different Water Models	Yalda	Ramezani	169bi
59	Size Is an Important Factor in Partitioning of Cargo Molecules into Liquid Condensates and Interfaces	Gregory	Dignon	169bj
60	Utilizing Surfactant-Specific Graph Convolutional Networks to Predict Surfactant Adsorption Efficiency	Seokgyun	Ham	169bk
61	Maxwell-Stefan Diffusivities of Oil-CO ₂ Mixtures in Nanopores: Physics and Machine Learning Models	Hongwei	Zhang	169bl
62	Hydrophobic Deep Eutectic Solvents As Extraction Agents of Nitrophenolic Removal from Water	Noor	Alomari	169bu
63	Theoretical Approach to Elucidating the Dynamics Behavior of PFAS at the Water and Hydrophobic Deep Eutectic Solvents Interphase	Noor	Alomari	169bp
64	A Nanoscopic Explanation on Hydrophobic Deep Eutectic Solvents and Their Carbon Dioxide Solubility Performance at High-Pressure.	Noor	Alomari	169bq
65	Protein Mediated Calcite Nucleation and Growth Characterized with Molecular Dynamics Simulations	Marlo	Zorman	169bm
66	Protein Preparation: Is One Protonation State Enough?	Nate	Abraham	169bo
67	Effect of Maturity on the NMR Relaxation of Kerogen Using MD Simulations	Yunke	Liu	169br
68	Elucidating the Fluxionality and Dynamics of Zeolite-Confined Au Nanoclusters Using Machine Learning Potentials	Siddharth	Sonti	169bs
79	Combining Forward and Inverse Design of Covalent-Organic Frameworks for Methane Storage Via Data-Driven Discovery	Xiaoyu	Wu	169bt
69	Accelerating Polymer Informatics Via Polymer Similarity	Jiale	Shi	169bz
70	Development of Chimes Machine Learned Interatomic Potentials for All Silica MFI Zeolites	Vallabh	Vasudevan	169cb
71	Development of Experimental Guidelines for Organic Field-Effect Transistors (OFETs) Using Machine Learning Based on Ofets Database	Myeongyeon	Lee	169cc
72	Practical Approaches to Bottom-up Coarse-Graining for Soft Liquid Crystalline Materials	Dylan	Fortney	169ce
73	Molecular Dynamics Simulation Study of the Huntingtin Fibril's Morphology, Stability, Kinetics, and Role of Water	Avijeet	Kulshrestha	169cf
74	Molecular Design of High Performance Electrolytes with Generative Algorithm	Vignesh	Sathyaseelan	169cj
75	Generative Artificial Intelligence for Property-Guided Design of Co-Polymers	Jana	Weber	169cl
76	Matlab Data Processing and AI for Molecular Chemistry	Aycan	Hacioglu	169cm
76	Matlab Data Processing and AI for Molecular Chemistry	Hosseini	Jooya	169cm
77	Accelerating Drug Discovery through the Automatic Population of a Pharmaceutical Ontology Using Knowledge Graphs	Naz Pinar	Taskiran	169cn
78	A Based Take on Bayesian Optimization: Tuning Kernelized Bandits for Expensive Experiments with Mixed, Discrete Inputs	Christoph	Griehl	169co
80	Cross-Database Discovery of Metal-Organic Frameworks with Open Cu(II) Sites for Biogas Upgrading through Machine Learning	Xiaoyu	Wu	169dd
83	Advancing Molecular Property Prediction and Chemical Reactivity Understanding through High-Throughput Quantum Chemistry and Graph Neural Networks	Haoyang	Wu	169cq

169 - Poster Session: Computational Molecular Science and Engineering Forum*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
85	Advancing Molecular Screening: Integrating Operating Conditions into Transformer Models for Chemical Engineering	Aahil	Khambhawala	169cs
86	Diversity-Driven, Bayesian Optimization of MOF Designs to Optimize Performance for Environmental Applications Involving NH ₃ Adsorption	Diego	Gomez Gualdron	169ct
87	Leveraging Grand Canonical Monte Carlo and Machine Learning for Classification of Solvent Affinity in Functionalized Polymer Membrane Materials	Andres	Ordorica	169cu
88	Expanding Chemical Synthesis Planning to Explore Chemo-Enzymatic Pathways Using Minimal Transitions	Mohit	Anand	169cv
89	Integrating Machine Learning with Evolutionary Algorithms to Design and Discover High-Performing MOFs for Methane Adsorption Using Building Blocks and Crystal Information	Nicole	Beauregard	169cw
90	Developing an Open-Source Tool for Generating Rich and Consistent Sigma Profiles	Fathya	Salih	169cx
91	AI Based Exploration on Synthesizable Space for Autonomous Laboratory	Nayeon	Kim	169cz
92	Predicting Ionic Conductivity of Ionic Liquid and Solvent Mixtures Using Machine Learning	Masrur	Ahmed	169da
93	Representation of Stochastic Polymeric Materials for Machine Learning Applications	Ludwig	Schneider	169dc
94	Using Reinforcement Learning to Design Polymers with Specified Properties	Haifan	Zhou	169de
95	The Hidden Chokepoints: Exploring Gas Diffusion in the Codh/ACS Enzyme Complex Using Molecular Simulations.	Suman	Samantray	169ch
97	Unsupervised Computational Analysis of Major Histamine Complex II-Binding Epitope Sequences	Hannah	Hargrove	169cy
99	Efficiently Screening Metal-Organic Frameworks Via Molecular Simulation with Multi-Armed Bandit Algorithms	Qia	Ke	169df
100	Using Enhanced Sampling Methods to Elucidate the Mechanism of Noncanonical Redox Cofactor Dependent Engineered Enzymes	Parth	Bandivadekar	169di
101	The Molecular Simulation Design Framework (MoSDeF): Enabling High-Throughput Simulations via Active Learning Integration Workflows	Nicholas C.	Craven	169dl
111	Development of a Modifiable Atomistic Cellulose Nanocrystal Model	Arash	Elahi	169dj
112	Temperature-transferable Coarse-grained model for Studying Pluronic Triblock Copolymers	Arash	Elahi	169dk

171 - Poster Session: Fluid Mechanics*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
102	Dimensional Analysis to Scale Impulse and Overpressure Caused by Shock and Subsonic Waves	Nate	Breed	171a
103	Dolphin Skin CFD Analysis for Biomimetic and Hydrodynamic Applications	Joseph	Krahn	171b
104	Influence of Reynolds Number on Variations of Turbulent Statistics in Channel Flow of Dilute Polymer Solutions	Kyoungyoun	Kim	171d
105	Measurement of 3D Flow Patterns with TS-PIV in a Stirring Blade Turning Space from Laminar to Transitional Regime.	Takemi	Shinkai	171e
107	Utilization of the Euler-Lagrange Approach for Modelling of Gas-Liquid and Liquid-Liquid Systems	Pavel	Krysa	171g
108	Elucidating Tunable Diffusioosmotic Flow Reversals Due to Ion-Ion Electrostatic Correlations	Shengji	Zhang	171h
109	Elucidating Hydrodynamic Interactions and Steric Hindrance in Diffusiophoresis in Porous Media	Siddharth	Sambamoorthy	171i
110	Experimental Analysis of Power Consumption and the Metzner-Otto Constant for Highly Shear-Thinning Fluids	Mehak	Jain	171j

171 - Poster Session: Fluid Mechanics*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
113	A Combined Experimental and Computational Study on MHD Rotating Flow of a Hybrid Nanofluid over an Expanding Surface with Chemical Reaction and Heat Dissipation	Sang W.	Joo	171c
115	Influence of Surfactants, Polymers and Proteins on Foam Film Drainage	Chenxian	Xu	171k
116	Explorations of Intermittency at the Cusp between L → P and L → M Types of Laminar-to-Turbulent Transitions in Drag-Reducing Polyox W301 Solutions	Preetinder	Virk	171l
117	Symmetry-Group-Protected Microfluidics for Multiplexed Stress-Free Manipulations	Bin	Liu	171n
118	A Viscosity Measurement Technique for Ultra-Low Sample Volumes	Mahesh	Tirumkudulu	171o
119	Insights into Bubble Coalescence Phenomena: Utilizing the Navier-Stokes-Korteweg Approach	Christian	Wachsmann	171p
120	Exploring the Influence of Evaporation on Respiratory Droplet Dynamics in Ventilated Indoor Environments	Antonio	Buffo	171r
121	Simulation of a Sedimenting Sphere in a Viscoelasticfluid with Openfoam	Claire	Love	372f
122	Brittle-to-Ductile Rheology in Composite Hydrogels with a Microfibrinous Network	Chenxian	Xu	171ad
123	Performance of Triboelectric Nanogeneration Using Flow through Porous Elastomers	Kushal	Yadav	171v
124	Developing Next-Generation of Adeno-Associated Viral (AAVs) Vectors for Therapeutic Gene Delivery	Danqing	Zhu	171w
125	Optical Tweezers Map Spatiotemporal Force Generation in Active Actin-Microtubule Composites	Rae	Robertson-Anderson	171y
126	A Microbotic Design for the Spontaneous Tracing of Isochemical Contours in the Environment	Sungyun	Yang	171z
127	Influence of Ventricular Size and Surgical Approach on Flow Distribution in Ventricular Catheters	Christopher	Roberts	171f
128	Analyzing Cerebrospinal Fluid Dynamics in Ventricular Catheters for Pediatric Hydrocephalus	Christopher	Roberts	171u
129	Coupled Level-Set Volume of Fluid (CLS-VOF) Computational Fluid Dynamics of a Molten-Tin Bubble Column Reactor for Sulfur Hexafluoride (SF ₆) Degradation	Son Ich	Ngo	171aa
130	Directed Motion of Light-Activated Janus Colloids in a Thermotropic Nematic Liquid Crystal	Antonio	Tavera-Vazquez	171ab
131	The Effect of Mixing Conditions on Drag Enhancement of Polymer Solutions in Pipes	Kotaybah	Hashlamoun	171ac

172 - Poster Session: Interfacial Phenomena (Area 1C)*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
132	Evaluation of Stability in Liposomes Composed of Mixed Phospholipids	Sharareh	Rezaei	172a
133	Compatibility of the Surfactant-Chelating Agent Formulations for EOR Application	Muhammad Shahzad	Kamal	172b
134	Biomimetic Artificial Knee Meniscus	Melika	Farzam	172c
135	Light-Induced Oxidation of Polysorbate 80 in Citrate Buffer with Glutathione Disulfide (GSSG) and Trace Iron	Estephanie	Nottar Escobar	172d
136	A Nanometer Thick Ionic Liquid Coating with Simultaneously Hydrophilic/Oleophobic Behavior	Alan	Tirado	172e
137	Investigating Mineral-Water Interfacial Dynamics through Zeta Potential Measurements with Mono and Divalent Salts	Monica	Iepure	172f

173 - Poster Session: Environmental Division

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
96	The Hidden Chokepoints: Exploring Gas Diffusion in Codh/ACS Enzyme Complex Using Molecular Simulations.	Suman	Samantray	173i
138	CO ₂ Adsorption and Utilization Using Silica Based Aerogel in Factory Chimney Environments.	Kyunghoon	Min	173a
139	The Role of Support on the Absorption Capacity of the Supported Ionic Liquid Membranes for CO ₂ Capture	Sarang	Ismail	173b
140	Experimental Study on the Sequestration of CO ₂ through Mineral Carbonation of Ground Solidification Material	Heejun	Kim	173c
141	Experimental Investigation of Microwave-Based Direct Air Capture Technology Using Zeolite 13X in a Fluidized Bed Reactor	Rahim	Boylu	173d
142	A Study on the Material Characteristics for Trace CO ₂ Capture	Jo Hong	Kang	173e
143	Sustainable and Feasible Carbon Capture and Utilization Pathways Towards Net-Zero Emissions	Tesfalem	Atsbha	173f
144	Evaluation of the Performance of CO ₂ Absorbent Solutions using Bench Scale Membrane Contactor Systems	Hojun	Song	173g
145	Modified Amine-Based Sorbent in Monolithic Structure for Direct Air Capture	Joo-Youp	Lee	173h
146	Application of Fluidized Bed Reactors for CO ₂ Hydrogenation for the Production of Hydrocarbons	Hyungseok	Nam	173j
147	Recovery of NH ₃ from Livestock Manure for Renewable, Net-Zero Fuel	Ken	Tasaki	173k
148	A Novel Lstm-CNN Framework Forecasts India's Air Quality Using Historical Data, Outperforming Traditional Methods. Insights Aid Tailored Pollution Mitigation.	Swetha	.	173m
149	Seasonal Measurement of Greenhouse Gas Emissions from the Energy Capital of California	Zhongzhe	Liu	173n
150	Chlorine and Ammonia Removal By Dry Deposition during an Accidental Release: Considering the Importance of the Boundary Layer Resistance	Thomas	Spicer	173o
151	<i>Automatic Chemical Reaction Mechanism Reduction Using Artificial Intelligence: Applications in Atmospheric Chemistry</i>	Arijit	Chakraborty	173p
152	Photolytic Decomposition of Perfluorooctanesulfonic Acid (PFOS) By Composite Nanofibers of Fe(III)/PVDF Under UVC Light	Dipendu	Saha	173q
153	Conversion of Waste Plastic to Oils for Feed to High-Pressure Gasifiers	Angela	Darko	173r
154	Microplastics in Wastewater Treatment Facilities: Fate and Transport in the Cookeville Wastewater Treatment Plant and Literature Review	Sahera	Abumariam	173s
155	Influence of Polymer Architecture on Catalytic Deconstruction of Polyethylene	Alex	Balzer	173t
156	Simultaneous PFAS Mineralization and Sorbent Regeneration Using PFAS Mineralizing Molten Salts (PMMS)	Emily	Gonzales	173u
157	Catalytic Pyrolysis of Face Masks to Liquid Fuels	Zachary	Shin	173v
158	Optimization of the use of the River-Retention Pond System as an adaptive response to the Climate Change impact on water supply in rural Districts in the Caribbean	Festus	Addo-Yobo	173w
161	A Holistic Strategy for Treatment of Raw Landfill Leachate, Textile Contaminants and Pharmaceutical Wastewaters: An Electro-Peroxone-Based Approach	Ramya	Srinivasan	173x
159	A Computational Study on Groasis Waterboxx Technology: The Feasibility of Developing Green Alternatives Made of Poly-Lactic Acid and Polybutylene Succinate	Heriberto	Garcia	173y
162	Bromate-Free Disinfection of Bottled Water Using High Voltage Impulse	InSoung	Chang	173z

173 - Poster Session: Environmental Division

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
163	Molecular Dynamics Predicted Selenium Extraction to Reduce Selenate Toxicity in Wastewater	Tridip	Das	173aa
164	A Study in Mexico for Advancing the Circular Economy and Sustainable Waste Management through Optimization of Waste-to-Energy Technologies	Ilse María	Hernández-Romero	173ab
165	Preparation of Carbon Electrodes from Food Waste for Sodium-Ion Batteries	Isamu	Umeda	173ac
167	Effective Anodic Sulfide Removal Catalyzed By Nickel Phosphide Modified Stainless Steel Electrodes	Xin	Zhang	173ad
168	Tracking and Predicting Regional Greenhouse Gas Emissions: A Case Study of Connecticut	Peiyao	Zhao	173ae
169	Study of Potential Environmental Impacts during Traffic Accidents Involving Vehicles Transporting Liquid Hydrocarbons	Natalia	Godoy Silva	173af
170	Utilizing Mg-Bearing Minerals for Selective Nickel and Iron Recovery Coupled with Carbonates and Amorphous Silica Production	Ning	Zhang	173ag
171	Assessing Global Warming Impacts on Food and Macronutrient Supply By Compartmental Modeling Approach	Sinue Arnulfo	Tovar-Ortiz	173ah
172	Co-Hydrothermal Carbonization of Biodegradable Straw Waste and Rice Husk	Doyeon	Lee	173ai
173	An Analysis of Abandoned Mines in Texas	Emmanuel	Dada	173aj
174	Phytoremediation of soils contaminated using <i>Phaseolus vulgaris</i> L and amendments	Alejandra	Vargas-Beltrán	173ak
175	Synthesis of biochar using economical pyrolysis processes as a remedial soil amendment	Juan F.	Saldarriaga	173al
176	Enhancing Water Security and Defense: Exploring Graphene Nanoplatelet (GnPs) for Efficient Cyanotoxin Removal	Jesse	Roberts	173am

174 - Poster session: Bioengineering

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
82	Complex Collectives: Investigating Biofilm Patterning and Ant Traffic	Kimberly	Bowal	174ca
160	Proliferation of Mouse Spermatogonial Stem Cells Using Chitosan/Alginate/Graphene Oxide Nanocomposites	Heriberto	Garcia	174g
177	Engineering the Cyanobacterium <i>Synechococcus</i> sp. PCC 11901 for D-Lactate Bioproduction Using MEPS.	Nandini	Kannoju	265f
178	Unlocking the Potential of Cell-Free Biocatalysis: Sustainable Terpene Production with Thermostable Enzymes	Sylvia	Sarnik	174a
179	Leveraging Directed Evolution to Develop a Biocatalytic Synthesis of a Tetrapeptide Using an ATP-Dependent Amino Acid Ligase	Agnieszka	Gil	174b
180	Enhanced One-Pot Cascade Performance Using Enzyme-Stabilizing Lipid Bilayers	David J.	Kelaita	174c
181	Biochemical Characterization of the Flavin-Dependent Monooxygenase Required for the Biosynthesis of the Nocardiosis-Associated Glycolipid	Antonio	Del Rio Flores	174d
182	Discovery and Biosynthesis of Oxazolismycins, a New Class of Angiotensin-Converting Enzyme Inhibitors	Yuwei	Pan	174e
183	<i>In Vitro</i> Modeling of 3D Breast Cancer and Primary Keloid Fibroblasts Cell Interactions to Elucidate Changes in Collagen-I Expression and Endocrine Resistance.	Braulio	Ortega Quesada	174j
184	Establishing and Characterizing Medicinal Plant Cell Lines for the Production of Anticancer Agents	Antonio	Sassano	174k
185	Neuronal Innervation Regulates the Secretion of Neurotrophic Myokines and Exosomes from Skeletal Muscle	Kai-Yu	Huang	174n
186	An Innovative Antibody-Drug Conjugate to Treat Non-Small Cell Lung Cancers	Jiashuai	Zhang	174p

174 - Poster session: Bioengineering

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
187	Why Are You so Sensitive? Clone-Specific Lactate Sensitivity in CHO DG44	Sean	Mack	174q
188	Defining Effects of Senescence on Single-Cell Motility States with Aging	Anshika	Agrawal	174r
190	Analysis of Extracellular Vesicles and Particles for Investigating Intercellular Communication in the Irradiated Breast Microenvironment	Greg	Berumen	174s
191	Scalable Fabrication of 3D Structured Microparticles Using Induced Phase Separation	Sohyung	Lee	174h
193	Curcumin-Loading Human Choroid Plexus Organoid-Derived Extracellular Vesicles to Alleviate Neuro-Inflammation	Justice	Ene	174i
195	Analysis of Repaired Coarctation of the Aorta Using CFD Simulations	David G.	Foster	174t
196	Engineering Antibody-Invertase Fusion Proteins for Enhanced Detection of Diseases Targeted Antibodies Using Commercial Glucometers	Xinran	An	174u
197	Exploring New Flavonoid Glycosides through Biotransformation-Bioactivity-Guided Purification	Jiumn-Yih	Wu	174v
199	Prediction of Thawing Rates and Stability of Large Scale Frozen Biopharmaceuticals Using Machine Learning	Venkatraman	Nagarajan	174x
200	Enhancing Microbial Robustness: Proteomics-Guided Assessment of Enzyme Stability	Onyeka	Onyenemezu	174y
201	Optimizing Site-Specific Protein Conjugation through Free Cysteine Engineering to Improve Artificial Antigen Presenting Cell Technology	Carson	Stephenson	174z
202	Metabolic Engineering of <i>K. Marxianus</i> for Improved Polyketide Production	Tharini	Siddappa	174bc
203	Unveiling Plant Perception Mechanisms: Establishment of a Generic Kinase Substratome Identification Platform in Yeast	Xiaoxuan	Teng	174ac
204	Artificial Lipid Biomembranes for Full-Length Sars-Cov-2 Receptor	Ting	Wang	174af
205	Characterization and Function Test a Unique MAX1 Homolog from <i>Prunus</i>	Kaibiao	Wang	174ag
206	Investigating the Mechanism and Immunomodulatory Effects of IL-7 Potentiation By a Neutralizing Anti-Cytokine Monoclonal Antibody	Emily	Ariail	174ah
207	Extensional Versus Shear Flow Dynamics and Cell Properties in High Density Cell Cultures	Hyeon	Choe	174o
208	Correlation of a Shape Factor and Degree of Saturation of Red Blood Cells to Vaso-Occlusive Episodes in Sickle Cell Disease and Potential for Magnetic Separation	Hyeon	Choe	174ba
209	CD276-Targeted Dual-Payload ADC Triple Negative Breast Cancer Treatment	Zhuoxin	Zhou	174w
210	Engineered Somatostatin Receptor 2 Monoclonal Antibody to Target and Treat Neuroendocrine Tumors	Zhuoxin	Zhou	174ae
211	Alignment-Free Prediction of HLA Class II Peptide Binding Using Deep Learning and Cross-Correlation of Amino Acid Properties	Hyeju	Song	174ai
212	Modeling Amyloid Beta Aggregation Inhibition with Decapeptide	Abdul	Majid	174aj
213	Optimizing Protein Expression in One-Pot Pure Systems: Insights into Reaction Composition and Translation Efficiency	Yan	Zhang	174ak
214	Copper Oxide Nanoparticles Induce DNA Damage in Endometrial Cancer Cells	Jordan	Berezowitz	174al
215	Dynamic Control of a Biosynthetic <i>cis,cis</i> -Muconic Acid Pathway in Model-Based Engineered <i>e. coli</i> Strains Utilising Two qCRISPRi Circuits	Mona	Abo-Hashesh	171x
216	Engineering Whole Cell-Based Microbial Biosensors for Detection and Bioremediation of Chemical Contaminants Using an Efficient Genetic Prototyping Approach	John	Bauer	174am
217	Towards Rapid Real-Time DNA Analysis Using Quantitative Fluorescence in Convective PCR	Walın	Moorsol	174ao

174 - Poster session: Bioengineering

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
218	Quantitative Analysis of DNA Helicity State within a Convective PCR Chamber through CFD Simulations	Amir Hossein	Hazeri	174ap
219	Robust Aptasensor Design for <i>S. Aureus</i> Detection	Shokoufeh	Soleimani	174aq
220	Simple Chip Assay for Determination of Percentage Full Payload Adeno-Associated Virus Capsids	Zach	Hetzler	174ar
221	Smartphone V-Chopper: Cost-Effective Luminescence Lifetime Imaging Using Machine Learning	Alireza	Velayati	174as
222	Near Real-Time Urinary Chloride Monitoring in Cardiac Patients By Measuring Chloride Differential Adsorption and Reaction	Archi	Agrawal	174at
223	Novel IMAC Absorption Size Exclusion Chromatic Matrices for Detection and Isolation of Biomarkers for Early Detection of Diseases from Complex Biological Fluids	David	Mier Salazar	174aa
225	Analysis of Intrinsic Magnetic Susceptibility of Single Cells Via Cell Tracking Velocimetry for Disease Diagnosis	Jenifer	Gomez Pastora	174an
227	Peptide Biosensing for Minimally Invasive Diagnosis of Melanoma Skin Cancer	Eleni	Chatzilakou	174au
228	A Smart Wearable Tape for Home-Based AI-Assisted Diagnosis of Infectious Diseases	Yumeng	Cao	174ax
229	Investigation of Arc Protein-mRNA Binding Dynamics Via Surface Plasmon Resonance Biosensors	Vaibhav	Upadhayay	174ay
230	Elucidation of Toxicity and Tolerance Mechanisms to Lignocellulosic Biomass Hydrolysate for <i>Clostridium Acetobutylicum</i> Using Transcriptomics and Metabolomics	Mitchell	Wheeler	174bd
231	Transporter Engineering for Improved CHO Cell Culture	Alexandria	Adams	174be
232	Algae-Bacteria Cultivation Study on Salt Marshes Environment	Jiwei	Chen	174bf
233	Engineering the Transcriptional Repressor-Based Genetic Inverter for the Regulation of Tryptophan Derivatives Production in <i>Escherichia coli</i>	Xinyu	Gong	174bg
234	Orthogonal Ahl-Based Quorum Sensing Provides Wider Design Space for Optimal Regulation	Michael	Ream	174bh
236	Understanding Mutant Strategies of <i>Clostridium Tyrobutyricum</i> Using a Systems Identification-Based Framework for Genome-Scale Metabolic Model Analysis.	Loyal	Murphy	174bj
237	Toxic Metabolites Generate Phenotypic Bifurcations and Cheating in <i>Escherichia coli</i> without Transcription Elongation Factors	Gabrielle	Leon	174bk
238	Development of a Synthetic Biology Toolkit for Filamentous Fungi to Program Engineered Living Materials	Jeremy David	Adams	174bl
239	Flexible and Adaptable Neural Array Biosensors with Liquid Metal Microfluidic Channels	Seoyeon	Won	174az
241	Process Strategy to Produce a Bacterial Cellulose Membrane Containing Ferulic Acid for Cosmetic Applications	Irene	Martinez	174bb
242	Optimization of Chimeric Protein Production for Shiga Toxin-Producing <i>Escherichia coli</i> (STEC) Vaccines	Irene	Martinez	174ab
243	Advancing the Synthetic Biology Toolkit for <i>Kluyveromyces Marxianus</i> : Multi-Copy Integration Strategies and Multi-Copy Plasmid Development	Sidney	Eichelberger	174bm
244	Microbe Interaction Unveiled through Click Chemistry	Daniela	Ruiz	174bn
245	Optimization of Cell-Free Bacteriophage Synthesis of Bacteriophage T7	Amanda	Foote	174bo
246	Bringing Physical Signals into Cell-Free Expression	Junzhu	Yang	174bs
247	Systematic Mapping of Bacterial Crispra Design Rules and Implications for Synergistic Gene Activation	Cholpisit	Kiattisewee	174bv
248	Electrochemical Control of Gene Expression with a Tunable Redox-Sensitive Transcriptional Regulator	Evan	Miu	174bw
249	Engineering Horizontal Gene Transfer Systems to Control Microbial Populations of Increasing Complexity	Sai Varun	Aduro	174bx
250	Modeling Pairwise Orthogonal Obligate Symbioses Reveals Regimes of Co-Existence and Exclusion	Michaela	Jones	174by

174 - Poster session: Bioengineering

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
251	Scchat: An AI Copilot for Analyzing Single-Cell RNA Sequencing Data	Yen-Chun	Lu	174bz
255	CRISPR-Grit: Guide RNAs with Integrated Repair Templates Enable Precise Multiplexed Genome Editing in the Diploid Fungal Pathogen <i>Candida Albicans</i>	Christopher	Cotter	174bp
256	Synergistic Cotargeting of Essential and DNA Repair Genes As a Novel CRISPR-Cas Antifungal Strategy	Christopher	Cotter	174br
257	Quantitative Xenogenomics: Deploying High-Accuracy Sequencing for Improving Replication of 6-Letter DNA Alphabets	Nicholas	Kaplan	174bt

175 - Poster session: Engineering Fundamentals in Life Science

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
194	Anti-Senescence Effects of Human Blood Vessel Organoid-Derived Extracellular Vesicles	Justice	Ene	175j
226	Promising Routes for Mitigating RBC Storage Lesion	Jenifer	Gomez Pastora	175r
252	Cluster Formation of Macrophages Depends on Their Activation	Lawrence J.	Dooling	175a
253	Connecting the Unfolded Protein Response and DNA Damage Response: The Role of IRE1 in DNA Damage Repair Pathways Under Elevated Levels of Palmitate.	Kevin	Chen	175d
254	Overcoming the Challenges of Fluoro-Pharmaceutical Encapsulation Via Flash Nanoprecipitation through Solubility Parameter Matching	Kiana	Bahrami	175f
258	High-Accuracy Nanopore Sequencing of 6-Letter DNA for Synthetic Biology Applications	Nicholas	Kaplan	175ac
259	Retinal Progenitor Cell Differentiation By Electrical Stimulation on Microcircuit Interfaces	Austin	Sympson	175g
260	Developing an Elastic Dome for the Study of Cell Mechanobiology	Gideon	Nyarko	175h
261	Dynamics of Circulating Tumor Cells inside Microfluidic Separators	Agnieszka	Truszkowska	175k
262	Investigating the Cross-Talk between Insulin and Glucagon Secretion By Pancreatic Alpha- and Beta-Cells	Emmanuel	Tzanakakis	175l
263	Engineered Dual Universal CAR-Natural Killer Cells from Human Pluripotent Stem Cells for Targeted Cancer Immunotherapy	Xiaoping	Bao	175m
264	Functional Characterization of Geraniol Synthase Involved in Monotropein Biosynthesis in Blueberry Using Computational and Molecular Based Approaches	Ishveen	Kaur	175n
265	Discovering Novel Ankyrin Protein Modulators through an Optimized Yeast Surface Display System	Ethan	Slaton	175o
266	CRISPR/Cas9-Mediated Genome Editing to Generate Cell Wall-Deficient Tobacco By-2 Cell Lines for Improved Recombinant Protein Production	Jianfeng	Xu	175s
267	An in-Situ Hydrogen Sulfide Synthesis and Delivery Technique for Treatment and Healing of Chronic Wounds	Bill J.	Brooks	175t
268	Engineering an α -P-Selectin Antibody for Quantifying Drug Delivery in Glioblastoma	Omar	Abed	175u
270	Computational Analysis of FRET-Based Molecular Tension-Sensing Probes Reveals Mechanosensing Dynamics in Hypertrophic Cardiomyopathy	Georgina	Stephanie	175w
271	Fructose Effects on PC3 Cells Using GLUT5 Transport Receptor	Martin	Guerrero	175x
272	Silver Nanoparticle Sensor Array for the Detection of Sars-Cov-2 for Engineering Fundamentals in Life Science	Benjamin	Lam	175aa
276	The Excess Surface Area of the Nuclear Lamina Determines Whether Cells Can Migrate through Narrow Constrictions.	Richard B.	Dickinson	175y
277	Mathematical Modeling of Gut-Mediated Inflammation Induced By Estrogen Deficiency	Ariel	Lighty	175z
278	Assessing Plasticity in Prostate Cancer Using Electrokinetic Techniques	Lexi	Crowell	175ab

175 - Poster session: Engineering Fundamentals in Life Science

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
279	High-Throughput Screening of Bacterial Ghost Drug Delivery Vehicles Against G-Protein Coupled Receptors (GPCRs)	Christopher	Vidmar	175ad
280	"Transport Cocktails" of Alpha-Particle Radionuclide-Antibody Conjugates for Solid Tumors	Aira	Sarkar	175ae
281	Messenger RNA Loaded Lipid Nanoparticle Delivery and Gene Expression in Trophoblast Cells Is Impacted By Ionizable Lipid Content	Alexandra	Harrison	175af
282	Non-Targeted and Targeted Lipid Drug-Loaded Nanoparticle Combination Delivery Outperforms Either Component in Metastatic Ovarian Cancer Treatment	Basar	Bilgicer	175ag
283	Intracerebral Nanoparticle Transport Facilitated By Alzheimer Pathology and Age	Shengzhe	Ding	175ah
284	Conformational Flexibility: Elasticizing Phospholipid Membranes	Thomas	Kinard	175ai
285	Apoptosis of Myrosinase Gene Expressed Lung Cancer Cells Treated with Glucosinolate-Containing Extracellular Vesicles Isolated from <i>Arabidopsis thaliana</i>	Sharjeel	Jokhio	175aj
286	Optimizing Solid Tumor Treatment with Antibody-Drug Conjugates Using Agent-Based Modeling: Considering the Role of a Carrier Dose and Payload Class	Melissa	Calopiz	175ak
287	Engineering a Next-Generation Vaccine: Targeting Pneumococcal Disease in an Aging Population	Justin	Bassett	175am
288	Enhanced Delivery of Disease-Targeted Nanobody-siRNA Conjugates	Courtney	Culkins	175an
289	Endoplasmic Reticulum (ER) Stress-Induced Autophagy Alters the Efficacy of Cationic-Lipid Delivered Sirnas	Ryan	Splichal	175ao
290	Evaluation on Plant-Based Softgels (SeaGel® Technology) Versus Gelatin Softgels for Pharmaceutical Applications	Jin	Zhao	175ap
291	Incorporating Biological Factors Using Different Carrier Materials to Accelerate Implant Healing Capacity	Dina	Gadalla	175as
292	Coaxial 3D Bioprinting of Hydrogels with Small Diameters to Mimic Microvasculature	Berk	Uysal	175at
293	Developing a Granular Scaffold for Perfusable and Dynamic Stimulation of iPSC-Derived Beta Cells	Durante	Pioche-Lee	175au
294	An Engineered Culture Model to Mimic the Physical Boundary Conditions of the Lung Epithelium	Evelyn	Navarro Salazar	175av
295	Hydrogel Facilitated Co-Culture Tumor Microenvironment	Trishita	Chowdhury	175aw
296	Transcriptional Regulation of Engineered Living Materials	Gina	Partipilo	175ax
297	Cell Compatible Fluid Gels for Applications in Tissue Engineering	Cinzia	Amieni	175ay
298	Elucidating the Geometric and Charge Transfer Effects on the Spatial Uniformity of the Nanopore Electroporation Cell Transfection Method	Emily	McCorkle	175az
299	Elucidating and Engineering the Mechanism of Microbial Thermogenesis	Stephen	Chiu	175bb
300	Quantifying the Consequences of New Plasmid Acquisition	Habibul	Islam	175bc
301	An Interdisciplinary Framework Based on High-Dimensional Biology for a Comprehensive Understanding of the Effects of Environmental Stressors on Non-Communicable Diseases	Nafsika	Papaioannou	175bd
302	Integrated Omic Analysis Elucidates Phenotypic Plurality and Metabolic Bottlenecks in Industrial Antibody-Producing Chinese Hamster Ovary (CHO) Cell Lines	Saratram	Gopalakrishnan	175be
303	Assessing the Metabolic Responses of 3D Heparg Cells to Dibutyl Phthalate and DEHP Exposure: Insights from Untargeted Metabolomics	Thanasis	Papageorgiou	175bf
304	Metabolic Systems Biology of Poplar, a Biofuel Crop	Funke	Okunrinboye	175bg
305	Development of a Biosystems Analysis Framework to Elucidate Low-Dose Ionizing Radiation Response in Human Cells	Galib Hassan	Khan	175bh

175 - Poster session: Engineering Fundamentals in Life Science

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
306	Navigating Biological Systems with PBPK, Text Mining, and AI: In silico NAMS for the Development of Reliable and Robust Qaops	Achilleas	Karakoltzidis	175bi
307	Causal Discovery Algorithms Identify DNA Methylation Sites That Differentiate COPD Progression	Robert	Gregg	175bj
308	Dynamic Model of Intrathymic T-Cell Vs Myeloid Commitment	Sana	Khanum	175bk

176 - Poster session: Food and Bioprocess Engineering

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
309	Industrial-Scale Corncob Biorefinery	Mian	LI	176a
310	Newly Synthesis Different Types of Bioactive Nano-Glass with Levofloxacin Loading Capability	Mostafa	Sliem	176b
310	Newly Synthesis Different Types of Bioactive Nano-Glass with Levofloxacin Loading Capability	Aboubakr	Abdullah	176b
311	Strain Development and Fermentation of Chlorophyll Deficient Mutant Chlamydomonas Strains As a Neutral Phenotype for Nutritional Drink and Food Applications	Jeffrey	Horowitz	176c
312	Development of Potential Commercial Products from Giant Salvinia	Xiaobo	Lei	176d
313	Integrating Hyperspectral and Physicochemical Analyses for Monitoring Refrigerated Strawberry Chemometrics	Anderson	Bortoletto	176e
314	Investigating Greener Efforts in the Food Industry	Temitope	Esan	176h
315	Maslinic Acid-Based Edible Coating: A Novel Solution for Bacterial Antifouling and Fresh Produce Safety	Minchen	Mu	176i
316	Investigating the Impact of Moist and Dry Thermal Treatments on Immunoglobulin E (IgE) Binding to Pistachio Allergens	Leila	Fereidooni	176k
317	Flow-through Ion Exchange Chromatography As an Alternative Approach to Bentonite Treatment for Protein Removal in White Wine Stabilization	Ece	Goktayoglu	176l
318	Seafeed, Seaweed Bioactive Supplemented Animal Feeds	Negin	Ammari	176m
319	Developing Materials with Antimicrobial Properties By Using Cellulose Derivatives, Zn-Metal-Organic Frameworks and Eugenol	Nelly	Ramírez-Corona	176f
320	An Integrated Design Method Based on Mixture Design and Physicochemical Properties Estimation for Formulating a Plant-Based Beverage.	Nelly	Ramírez-Corona	176g
321	Enhanced Food Safety: Extending Antimicrobial Efficacy of Commercial Wax through Incorporation of Nano-Encapsulated Essential Oil	Yashwanth	Arcot	176j
323	Novel Approach for Milk Preservation Using Hydrodynamic Cavitation	Aniruddha	Kulkarni	176n
324	Comparing Arbuscular Mycorrhizal Fungal Strains for Enhanced Carbon Sequestration in Agricultural Systems	Kong	Wong	176p
325	Biosynthesis of D-Allulose Using Engineered <i>Escherichia coli</i> by Fermentation	Li-Hai	Fan	176q
326	Reprogramming of Sugar Transport Pathways in <i>Escherichia coli</i> using Secy (Δ P) Channel and Its Applications	Qiang	Guo	176r
327	Improving Bioprocess Yield of Laparaxin – a Promising Therapeutic Peptide	Hesham	El Enshasy	176s
327	Improving Bioprocess Yield of Laparaxin – a Promising Therapeutic Peptide	Vasanth	Nayagam	176s
328	Kinetic Modeling and Process Engineering for Sustainable Biomanufacturing of Longer Chain Carbon Products from One-Carbon (C1) Molecules.	Bruno	Vieira	176t
329	Acetoin Production from Lignocellulosic Biomass Hydrolysates with a Modular Metabolic Engineering System in <i>Bacillus Subtilis</i>	Qiang	Wang	176u

176 - Poster session: Food and Bioprocess Engineering

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
330	Resource Mapping and Model-Informed Strain Design to Enhance pDNA Productivity in Bacterial Systems	Jackson	Black	176v
331	High-Level Expression of Extracellular Lipases in <i>Pichia Pastoris</i> for Butyl Butyrate Production	Seyi	Akoko	176w
332	Liamocins Production with Less Melanin in Genome-Engineered <i>Aureobasidium Pullulans</i>	Yutong (Yvie)	Yang	176x
333	Modulating NAD ⁺ /NADH Via Redox-Sensing Transcriptional Repressor Rex Knockout for Enhanced n-Butanol Production in <i>Clostridium Tyrobutyricum</i>	Geng	Wang	176y
334	Extending Carbon Chain Length in Genome-Engineered <i>Clostridium Tyrobutyricum</i> for Butanol and Hexanol Production with Enhanced Carbon Flux and NADH Availability	Qingke	Wang	176z
335	Metabolic Engineering of <i>Clostridium Tyrobutyricum</i> for Butyl Butyrate Production	Hongxin	Fu	176aa
336	Engineering and Deciphering the Effects of Spo0A and Orphan Histidine Kinases on Sporulation and Butanol Biosynthesis in <i>Clostridium Tyrobutyricum</i>	Zonghao	Zhang	176ab
337	Modulating Aging By Knocking out the Autolysin Gene <i>Lyt b</i> in <i>Clostridium Tyrobutyricum</i> Increased Cell Chronological Lifespan and n-Butanol Production in Fermentation	Krite	Prachumdee	176ac
338	Improving Butanol Tolerance of <i>C. Tyrobutyricum</i> By Introducing Heat Shock Proteins from an Extremophilic Bacterium	Jialei	Hu	176ad
339	Improved Strain Tolerance and Process Robustness for Energy-Efficient Butanol Production By Histidine Kinase Regulation in Clostridia	Chuang	Xue	176ae
340	The Effects of Inhibitors from Biomass Hydrolysates to n-Butanol Production Using Engineered <i>Clostridium Tyrobutyricum</i>	Abdullahi Adeto	Inaolaji	176af
341	Membrane Filtration of Clove Oil Waste Residue	Chavdar	Chilev	176ai
342	Efficiency Optimization of Sugar Concentration: Integrating Thermal and Mechanical Vapor Recompression Techniques with Economic Evaluation	Song	Wang	176aj
343	Valorization of the Waste Streams from the Steam Distillation of Essential Oils, Using Nanomembrane Separation.	Dimitar	Peshev	176ak
344	Valorization of Residual Water from the Hydrodistillation of Rosa x Damascena By Nanofiltration	Nevena	Lazarova-Zdravkova	176al
345	Amphiphilic Hairy Cellulose Nanocrystals: A Sustainable Solution for Scale-Resistant Multiphase Flows	Roya	Koshani	176am
346	Adtoolbox: Quantitative Prediction of Anaerobic Digestion Metabolism Using Metagenomics Data	Parsa	Ghadermazi	176ao
347	Characterization of Microbiome Dynamics Using Flow Cytometry for Napier Grass Anaerobic Digestion	Madhumita	Priyadarsini	176ap

177 - Poster Session: Materials Engineering & Sciences (08A - Polymers)

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
348	PFAS Minimization Via Random Semifluorinated Copolymer Films Prepared By Combining Spin Coating and Ring-Opening Metathesis Polymerization	Matthew	Vasuta	177b
349	Research in Novel Solid Sorbents for Direct Air Capture and Carbon Capture.	Daniel	Casaban Padrino	177c
351	Evaluation of Mechanical and Thermal Properties of Recycled Plastics Using ϵ -Caprolactam Based Coupling Agents and Prediction of Properties through Machine Learning	Duyoung	Choi	177e
350	Driving Sustainability: The Role of Plastics in the Automotive Industry	Hossein	Abedsoltan	177g
353	Morphology of Enzyme-Random Copolymer Complexes	Akorfa	Dagadu	177i

177 - Poster Session: Materials Engineering & Sciences (08A - Polymers)

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
354	To Investigate the Effect of Smds on the Synthesis/ Electrical /Mechanical/Electro-Mechanical/Self-Healing Properties of PANI/Paampsa System	Arya	Ajeev	177k
355	Development of Acceptor Materials for Organic Photovoltaic Devices through Computational Design	Angela	Montaño Herazo	177l
356	Challenge for Trade-Off Relationship between Mechanical Property and Healing Efficiency of Self-Healable Polyimide	Yong Chae	Jung	177m
357	Self-Healing Poly(γ -methyl- ϵ -caprolactone) Elastomer with Crosslinking through Hydrogen Bonding	Shuhei	Takamura	177n
358	Sliding Friction through Dislocation Glide in Shape Complementary Soft Interfaces.	Jasreen	Kaur	177o
359	Making Mechanochromic Palettes of Cholesteric Liquid Crystal Elastomers for Direct Visualization of Deformation	Hyewon	Park	177p
360	Pixelated Physical Unclonable Functions through Capillarity-Assisted Particle Assembly	Huiseong	Yun	177q
361	Cucurbit[8]Uril-Based Microcapsules Self-Assembled within Microfluidic Droplets: New Strategies for Actives Encapsulation and Application in Personal Care Industry	Yuting	Wu	177r
362	Manipulating the Motion of Active Particles of Varying Janus Balance and Aspect Ratio	Chih-Mei	Young	177s
363	Synthesis and Characterization of Biobased Copolyesters Based on Furandicarboxylic Acid. Poly(dodecamethylene furandicarboxylate)	Hesham	Aboukeila	177t
364	Interfacial Photopolymerization: A Novel Sustainable Approach for High-Resolution UV Photoprinting of Polymeric Materials	Niloofer	Goodarzi	177u
365	Light-Mediated Synthesis of α -Lipoic Acid (LA)-Based Bottlebrush Polymer	Hanqing	Wang	177v
366	Synthesis of Polyoxanorbornenes By Ring-Opening Metathesis Polymerization (ROMP) Techniques and Investigation of the Polymer Properties	Yousef	Fathi	177w
367	Nanoporous Membranes from Crosslinked Amphiphilic Block Copolymer Self-Assembly	Mostafa	Tabatabaei	177x
368	Freestanding Porous Solid Electrolytes for Advanced CO2 Electrolysis	Sarah	Adaryan	177z
369	Exploring the Contributions of Vehicular and Grotthuss Diffusion Mechanisms in Anion Exchange Membranes Using Molecular Dynamics Simulations	Mohammed	Al Otni	177aa
370	Examining Free Volume and Flexibility of Polymers of Intrinsic Microporosity (PIMs) from Molecular Dynamics Simulations	Diana M.	Aponte Claudio	177ac
371	Optimizing Performance of Foam-Templated Porous Hydrogels	Sarah	Onyembe	177ad
372	Simple Fabrication of Block Copolymer Gels with Stiffness Gradients	Kenneth	Mineart	177ae
373	Effect of Chain Stiffness and Dispersity on Interfacial Adhesion of Polymer Melts: A Molecular Dynamics Simulations Study	Taofeek	Tejuosho	177af
374	Exploring the Mechanism and Potential of Polystyrene-Zeolites Co-Pyrolysis System for Enhancing Styrene Recycling: A Molecule Dynamics Study	Shuangxiu	Ma	177ag
375	A Computational Fluid Dynamics (CFD) Simulation for Predicting the Processability of Polymers in a Twin-Screw Extruder with Experimental Validation	Jazmine Aiya	Marquez	177ah
376	Studies of Sorption Equilibria with Unique Stability of Temperature and Relative Pressure	Joe	Domingue	177ai
377	Studying Effect of Asphaltene Filler on the Mechanical and Physicochemical Properties of Poly(vinyl) Chloride (PVC) Polymers	Mohammad	Siddiqui	177aj

178 - Poster Session: Materials Engineering & Sciences (08B - Biomaterials)

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
240	Self-Assembling Three-Dimensional PEDOT:BF ₄ Electrodes with Diverse Electrodeposition Pathways	Seoyeon	Won	178l
273	Silver Nanoparticle Sensor Array for the Detection of Sars-Cov-2 for 8B Biomaterials Area within the Materials Engineering & Sciences Division	Benjamin	Lam	178m
378	Efficient Assembly of Genes That Encode Repetitive Fusion Protein Biomaterials	Brendan	Wirtz	178a
379	Thermal Vapor Deposition of a Perfluorocarbon Coating on Zirconium Phosphate Cation Exchanger: An Oral Sorbent for Urea Removal of Kidney Disease	Yihan	Song	178c
380	Engineering Hybrid Auxetic Scaffolds with Viscoelastic Hyaluronic Acid Hydrogels for Human Stem Cell Differentiation	Xingchi	Chen	178d
381	Investigating the Impact of Cell-Substrate Interactions on Nanoparticle Internalization	Sailesti	Joshi	178e
382	Resorbable Bone Pins for the Reduction of Fractures	Madhulika	Narayan	178f
383	Controlling Calcium Oxalate Monohydrate Crystal Growth: Investigating the Synergistic Effects of Cooperative Modifiers	Vraj P.	Chauhan	178g
384	Nanomaterials for Biosensing, Drug Delivery, and 3D Bioprinting.	Wonjun	Yim	178i
385	Understanding Cholesterol Precipitation in Biomimetic Environments	Dipayan	Chakraborty	178j
386	Bicontinuous Interconnected Porous Scaffolds As Extracellular Matrix Analogues for Driving Neurogenesis	Prince David	Okoro	178n
387	Protein-Polyphenol Adhesives for Bone Fracture Repair.	Shruti	Iyer	178o
388	<i>Renewable Chemical Herder from Direct Coupling of Furans with Allylic Alcohols over Aluminosilicate</i>	Xiaokun	Yang	178q
389	Liquid Metal Crosslinked Poly(3,4-ethylenedioxythiophene) Polystyrene Sulfonate (PEDOT: PSS) Conductive and Injectable Hydrogel	Qian	Zhou	178r
391	Self-Oxygenating Biomaterials for Regenerative Medicine	Gulden	Camci-Unal	178u
392	Comparison of Automated and Manual Layer-By-Layer Techniques for the Preparation of Heparin/Collagen Coatings and Study of Their Stability	Luis Carlos	Pinzon-Herrera	178v
393	The Significance of Coating Implementation on Human Mesenchymal Stem Cells (hMSCs)	Roaa	Hadi	178w
394	Gelatin Methacryloyl Granular Hydrogel Bioinks for in-Situ Bioprinting	Angie	Castro	178x
395	Improving Wound Healing Quality Via Gelma Granular Hydrogel Scaffold	Arian	Jaberi	178y
396	Non-Invasive Actuation of Chemical Reactions through Mechanochemistry and Gas Vesicle Proteins	Yuxing	Yao	178z
397	On the use of bacterial nanocellulose as an additive of drilling fluids	Diana	Estenoz	178ab

179 - Poster Session: Materials Engineering & Sciences (08D - Inorganic Materials)*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
398	Development of Manganese and Iron Mixed Metal Oxides for Thermochemical Energy Storage	Ping	Wang	179a
399	Facile Synthesis of Palladium Hydride Nanocrystals with Greatly Enhanced Activity and Durability Toward Formic Acid Oxidation	Siyu	Zhou	179b
400	The Impact of pH Variations on Early-Stage Hydration Kinetics and Microstructural Evolution of Ye'Elimite"	Godwin	Ogbuehi	179c
401	Solution-Free Synthesis of Mxene Composite Hybrid Nanostructures By Rapid Joule Heating	Jeesoo	Yoon	179d
402	Enhancing the Physicochemical Properties of Zeolites through Facile Post-Synthesis Treatments	Muhammad Fiji	Firdaus	179e
403	In-Situ Atomic Force Microscopy Investigation of Metastable Zeolite Crystallization	Zhiyin	Niu	179f
404	Insights into the Incorporation and Removal of Heteroatoms in Zeolite Catalysts	Debasmita	Halder	179g
405	Reactive Force Field Parametrizations to Examine Atomic Scale Processes on Stainless Steel in Chloride Environments	Chinmay	Mhatre	179h
406	Atomic Layer Deposition of Sintering Aids Accelerates Tungsten Powder Metallurgy	Davis R.	Conklin	179i
407	Tuning Zeolite Catalyst Acidity By Heteroatom Incorporation for Alcohol-to-Olefin Conversion	Amir	Abutalib	179j
408	Carbonaceous Adsorbents for Carbon Dioxide Capture	Pierre	Cautaerts	179k
409	Fabrication of an Electrochemical Sensor Array Using Functionalized Carbon Dots as the Sensing Elements	Munziya	Abutalip	179l
410	Growth of Copper-Nickel Dual Atom Catalysts over Graphene Variants as Active Anodes for Clean Oxygen Generation: Integrative Experimental and Computational Validation	Ahsan ul haq	Qurashi	179m

180 - Poster Session: Materials Engineering & Sciences (08E - Electronic and Photonic Materials)*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
411	Low-temperature structural battery electrolytes produced by polymerization induced phase separation	Sayyam	Deshpande	180a
412	Recycling of Lithium Ion Batteries through Low-Temperature Calcination of a Novel Intermediate.	Mriganka	Mondal	180b
413	Barium Polysulfide Breakthrough: The Key to Moderate Temperature Chalcogenide Perovskite Fabrication	Kiruba Catherine	Vincent	180c
414	Solution-Based Synthesis of Ultrathin Quasi-2D Amorphous Carbon for Nanoelectrics	Viet Hung	Pham	180d
114	Ni-Co Nanorods Decorated on Mo-Assisted NiS ₂ Nanoflowers Heterostructured Fully Fledged on Ni-Form for Fostering the Performance of Asymmetric Supercapacitors	Sang W.	Joo	180e
415	Shape-Dependent Plasmonic Properties of Liquid Metal Nanostructures	Sina	Jamalzadegan	180g
416	Improving Green Ammonia Production and Storage Using Absorbents	Emmanuel	Onuoha	180h
417	Effect of Additives Chain Lengths on the Solubility of Methane and Hydrogen for Applications in Flow Assurance, Storage and Transportation	Omkar	Kushwaha	180i
418	Ultrasonically Enhanced Hydrometallurgical Process for Li-Ions Battery Cathode Recycling	Elia	Colleoni	180j
419	Utilizing Peanut Oil-Derived Graphitic Carbon for Enhanced Performance in Lithium-Ion Batteries: A Sustainable Approach	Bindu	Fnu	180k
420	Unveiling the Electrochemical Potentials of Amino Acid-Derived Nitrogen Functionalized Magnetic Graphene	Russ	Smith	180l
421	A Non-Aqueous Rechargeable Fe-CO ₂ Battery for Carbon Capture and Energy Storage	Raju	Vadthya	180m
422	Topological Modifications of Layered Materials for Photonics	Wenhao	Shao	180o
431	Flexible transparent electrodes based on high-crystalline metallic nanowire networks	Hiesang	Song	180p
432	Ag NW-graphene hybrid based flexible electrode: Enhanced mechano-electric property of the hybrid device	Hiesang	Song	180q

181 - Poster Session: Materials Engineering & Sciences (08F - Composite Materials)

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
352	Synthesis and Efficiency Evaluation of Catalysts for Methane Dry Reforming Using Lithium-Free Waste Battery Materials Treated with Oxalic Acid.	Duyoung	Choi	181a
423	Polymer Composite for Deformable Electronics	Elizabeth	Bury	181b
424	Revolutionizing Composite Materials: Advancing Nanoparticle Orientation Control for High-Performance Fiber Fabrication	Varunkumar	Thippanna	181c
425	Thermoplastic Pre-Processing for Rapid Carbon-Carbon Composite Fabrication	Victoria	Collinsworth	181d
426	Graphitizing PBO Fiber and the Effect of Matrix Partner on Resulting Composites	Casey	Barrett	181e
427	Sustainable Generator and <i>In-situ</i> Monitor for Reactive Oxygen Species Using the Photodynamic Effect of Single-Walled Carbon Nanotubes in Ionic Liquids (ILs)	Erin	Witherspoon	181h
428	Rational Design of Precision Polymer Ligands for Modulating the Distribution of Functional Groups on Nanoparticle Surface	Chamberlain	Amofa	181i
429	Improving Water Vapor Barrier Properties and Film Forming Ability of Cellulose Based Film with Lotus Leaf and Gelatin	Behrokh	Shams	181k
430	Devitrification and Crystallization of Cellulose-Filled Polylactic Acid Toward Real-World Applications: Solid-State Shear Pulverization (SSSP)	Katsuyuki	Wakabayashi	181l
433	A Study on Thermomechanical Properties of Jeffamine-Based Multifunctional Polymer Nanocomposites	Romina	Keshavarz	181m
434	Conversion of CO ₂ and CH ₄ to CO over Bifunctional Catalysts Synthesized By Combustion Technique	Anand	Kumar	181n
434	Conversion of CO ₂ and CH ₄ to CO over Bifunctional Catalysts Synthesized By Combustion Technique	Parisa	Ebrahimi	181n
435	Natural Gas Desulfurization Using Titania and Ceria Nanotubes/Zeolitic Imidazolate Framework-8 Nanocomposites Suspended in Water	Abdullah	Alabbad	181o
436	Polylactic Acid/Multiwalled Carbon Nanotube-Polybutylene Adipate Terephthalate Bio-Nanocomposites with Novel Segregated Chayote Squash-like Domain Morphology	Utsab Roy	Ayan	181p
437	Differentiating Free Diffusing from Reacted Species in Vapor Phase Infiltration	Emily	McGuinness	181q
438	3D Printing Carbon-Carbon Composites for Multifunctional Properties	Dhameedar	Ravichandran	181r
439	Bimetallic Core-Shell ZIF Laser-Based Hybrid Nanocomposites As Efficient Electrocatalysts for Oxygen Reduction Reaction	Bamin	Khomami	181s
439	Bimetallic Core-Shell ZIF Laser-Based Hybrid Nanocomposites As Efficient Electrocatalysts for Oxygen Reduction Reaction	Mahshid	Mokhtarnejad	181s
440	Exploring Solvent-Free Fabrication of MOF-Fiber Composites Using Aerosol Assisted Particle Deposition	Darshana	Malusare	181u

182 - Poster Session: Nanoscale Science and Engineering Forum

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
224	Enhancing Light Absorption Properties of Hybrid Magnetic Nanoparticles Using Metal Chelation and Electroless Deposition of Metal Ions.	David	Mier Salazar	182e
274	Silver Nanoparticle Sensor Array for the Detection of Sars-Cov-2 for Nanoscale Science and Engineering Forum	Benjamin	Lam	182b
441	Fluorescent Nanothermometry-Enabled Robotic Minimally Invasive Laser Tissue Soldering	Oscar	Cipolato	182c
442	Glycan-Modified Cellular Nanosponges for Enhanced Neutralization of Botulinum Toxin	Dan	Wang	182d
443	Toward a Rational Design of Engineered Nano-Photonic Threshold Scale Inhibitors	Nadhem	Ismail	182f
444	Silver Nanoparticles Immobilized on Heat Treated Candle Soot for the Efficient Reduction of Aqueous Nitroarenes and Azo Dyes	Sourav	Halder	182g
445	Uniformly Dispersed FeTe ₂ Nanoparticles on Electrospun Nanofibers As Free-Standing Anodes for Sodium Ion Batteries	Xing	Li	182h
446	Density Functional Study for Atomically Dispersed Noble Metal on Mesoporous Carbide By Topotactic Conversion	Hayoung	Jeong	182i
447	Growth Mechanism Study of Metal-Organic-Framework Encapsulated Laccase Using E-QCM-D	Jingyi	Li	182j

183 - Poster Session: NSEF Graduate Student Poster Competition

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
98	Nanoscale Mechanical and Morphological Characterization of Ebolavirus-like Particles: Implications for Therapeutic Development	Hannah	Hargrove	183e
275	Silver Nanoparticle Sensor Array for the Detection of Sars-Cov-2 for NSEF Graduate Student Poster Competition	Benjamin	Lam	183f
322	Influence of Surface Parameters and Encapsulant Type on Nano-Pesticide Adsorption Thermodynamics on Plant Cuticle	Yashwanth	Arcot	183k
448	Near-Infrared Circularly Polarized Luminescence-Active Semiconductor Helices with Tunable Twist Counts	Kody	Whisnant	183a
449	Poster: Designing the Fluorinated Superfine-Activated Carbon Adsorptive Membrane for Selective Removal of Long- and Short-Chain PFAS	Medha	Kasula	183b
450	Evaluating Performance Variations in Ti ₃ C ₂ T _x Mxene Composite Polymer Electrolytes for Solid State Batteries: Analysis of Different Processing Techniques	Sahand	Serajian	183d
451	Enhancing Capillary Evaporation for Advanced Heat Transfer Applications with PbTe Nanoparticle Coating Layer	Moonchul	Park	183g
452	Membrane Degradation in Seawater Electrolysis: Understanding Anion Exchange Layer Decomposition Pathways Under Anodic Electrochemical Conditions	Isabela	Rios Amador	183h
453	Upcycled Polyvinyl Chloride (PVC) Support Layer from Waste PVC Pipe for Thin Film Composite Nanofiltration Membranes	Atta Ur	Razzaq	183i
454	Layer-By-Layer Nanoparticle Delivery of Synergistic Nucleic Acid Therapy for Ovarian Cancer	Eva	Cai	183j
455	Award Submission: <i>Quantifying Enzymatic Small Extracellular Vesicles (sEVs) for Metastatic Cancer Staging Via Magnetic Nanoporous Membrane (MNM) Activity Assay</i>	Tiger	Shi	183l

184 - Poster Session: Pharmaceutical Discovery, Development, and Manufacturing

Monday, October 28, 2024 3:30 PM - 5:00 PM

Exhibit Hall GH, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
456	Implementation of Benchtop CARR® Powerfuge™ Pilot Centrifuges into Vaccine Drug Substance Manufacturing	Jeffrey	Neuhaus	184a
457	Polysaccharide Charge Reduction For Conjugation Vaccine Modernization	Megan	McCarthy	184b
458	Need Big Particles but Have No Time? Rapid Development & Scale-up of Spray Drying to Control Particle Size	David	Goundie	184c
458	Need Big Particles but Have No Time? Rapid Development & Scale-up of Spray Drying to Control Particle Size	Benjamin	Hawkins	184c
459	Empirical Calculations for Reliable Batch Blending Operation Scale-up in Pharmaceutical Manufacturing	Kanishka	Ghosh	184d
460	Precipitant Surprise! Investigation and Mitigation of Media Precipitation during Scale-up and Technology Transfer	Benjamin	Hawkins	184e
460	Precipitant Surprise! Investigation and Mitigation of Media Precipitation during Scale-up and Technology Transfer	Brian	Thatcher	184e
461	Machine Learning Approaches to Characterization of Free Fatty Acid Derived Particles in Biopharmaceutical Formulations	David	Greenblott	184f
462	Viral Filtration Optimization for Challenging Non-Mab Exhibiting Rapid Flux Decay	Daniel	Gendy	184g
463	Particle Jamming upon Administration of Long-Acting Injectable Crystalline Drug Suspensions	Ziwan	Xu	184h
464	Comparison Among Lnp, PNP and Exosomes for Gene Delivery to Treat Triple-Negative Breast Cancer	Tanvi	Varadkar	184i
465	Improving Numerical Methods for Bioreactor Process Simulation and Parameter Estimation	Taehun	Kim	184j
466	Gaussian Process Regression Modeling to Predict α/β -Peptide Selectivity for Antifungal Drug Development	Joshua	Richardson	184k
467	High-Throughput Experimentation Reveals Scope and Limitations of Selective Phosphine Reductants and Enables One-Pot Mab Reduction/Conjugation	Cuixian (Trisha)	Yang	184l
468	Thermodynamics Analysis with Molecular Informatics for Understanding Pharmaceutical Cocrystallization Promoted in Fatty Acid Media	Yuna	Tatsumi	184n
469	Risk-Based Quality Control for the Safe and Efficient Biotechnological Batch Production of Lactic Acid	Austin	Braniff	184o
470	Impact of Droplet Evaporation on Polymorphism of Suberic Acid	Sheriff	Anofi	184p
471	Development of a Lab-Scale Fluid Bed Granulation Process within a Semi-Continuous Manufacturing Workflow	Sydney	Butikofer	184q
472	Antioxidants Supplementation to Cell Culture Media and Feed Influences Productivity and Product Quality of Mabs from CHO Cells	Erin	Kotzbauer	184r
473	Diffusion of Viral Vectors Informs Continuous Manufacturing with Aqueous Two-Phase Extraction	Seth	Kriz	184s
474	Unlock Bioprocessing Capacity: A Comparative Study Focused on Intensified Downstream Processes	Xuan	Han	184t
475	Machine Learning and Artificial Intelligence for Formulation Optimization	Daniela	Blanco	184u
475	Machine Learning and Artificial Intelligence for Formulation Optimization	Howard	Stamato	184u
477	Data 1.0 before Pharma 4.0: From R&D to Supply Chain	Nima	Yazdanpanah	184v
478	Federated Hierarchical Tensor Networks: A Collaborative Learning Quantum AI-Driven Framework for Healthcare	Amandeep	Bhatia	184w
479	Hybrid Modelling for Semi-Permeable Membranes: A Water Vapor Transmission Rate (WVTR) Stability Estimation.	Mandakini	Padhi	184x
480	CFD Modelling of Supercritical CO ₂ -Assisted Spray Drying for Drug Particle Production	Mohamad	Baassiri	184y
481	Spray Dryer Design for Robust Manufacturing of Amorphous Solid Dispersions	Christian	Lübbert	184z
482	Advancing Kinetic Parameter Estimation: A Metabolism-Informed Variational Bayesian Inference Approach	Ranjith	Chiplunkar	184aa

184 - Poster Session: Pharmaceutical Discovery, Development, and Manufacturing*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
483	Efficient Multi-Objective Bayesian Optimization of Chemical Reactions	Vidhyadhar	Manee	184ab
484	Scaling Organic Electrosynthesis: The Crucial Interplay between Mechanism and Mass Transport	Zachary	Oliver	184ac

185 - Poster Session: Decarbonization by Electrification*Monday, October 28, 2024 3:30 PM - 5:00 PM**Exhibit Hall GH, San Diego Convention Center*

BOARD NUMBER	Title	First Name	Last Name	Paper Number
485	Electrified Plasma-Swing Reactive Carbon Capture (RCC) Process for CO ₂ Upgrading to Useful Platform Molecules	Chae	Jeong-Potter	185a
486	Modeling of Electrothermal Reactor for Carbon Capture Using Electric Swing Adsorption	Sairaj	Patil	185b
487	Integration of renewable energy and reversible solid oxide cells towards decarbonizing the secondary aluminium production and urban systems	Daniel	Florez Orrego	185c