COLL

DIVISION OF COLLOID AND SURFACE CHEMISTRY

R. Gupta and D. Miller*, Program Chairs*

SUNDAY MORNING

Georgia World Congress Center
B314

Advanced In-Situ Imaging Methods for Colloidal Chemistry

Probing Interaction and Dynamics at the Nanoscale: Colloidal Nanoparticle Assembly

Cosponsored by COLL
Q. Chen, D. Li, Y. Xie, *Organizers*
Y. Han, H. Zheng, *Presiding*

8:00 . Anisotropic surface potentials induced by competitive ion adsorption enable the synthesis of branched cubic Pt mesocrystals. **D. Li**

8:30 . Liquid-phase electron microscopy of nucleation and growth and their implications for novel synthesis. **H. Zheng**

9:00 . Multimodal 4d-stem for colloidal nanoparticles. **Y. Han**, C. Shi, Z. Cheng, K. Zhao, Y. Yang, M. Engel, M.R. Jones

9:30 . Electric field driven flowing nanoparticle superlattice under liquid-phase transmission electron microscopy. **Z. Wang**, Q. Chen

9:45 . Unraveling nonclassical growth pathways of colloidal nanoparticles by liquid cell tem. **J. Park**

10:15 . Spontaneous nanoparticle pattern formation observed with liquid phase electron microscopy. **T. Woehl**

Georgia World Congress Center
B312

2026 Dong Qin ACS Award in Nanochemistry: Symposium in Honor of Luis Liz-Marzán

Nanostructure Synthesis

J. Perez-Juste, *Organizer*
Y. Yin, *Organizer, Presiding*
S. Neretina, *Presiding*

8:00 . Data-Driven design and synthesis of nanoparticles with high-index facets. **C.A. Mirkin**

8:30 . Looking under the interface at ligand surfaces: Gold nanorods then and now. **C.J. Murphy**

9:00 . Anisotropic colloidal particles through symmetry breaking. **Y. Xia**

9:30 Intermission.

10:00 . Exogenous reaction control using time and light. **J. Millstone**

10:30 . Breaking symmetry controls for forming substrate-base asymmetric plasmonic nanostructures. **S. Neretina**

11:00 . Chiral Ag, Pd and Pt nanoparticle made with chiral silica mold. **K. Nam**

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 3

Nanoparticle Materials

Synthesis and Self-Assembly: Nanoparticles Functionalization, Assembly and Applications

H. Fan, T. Li, Y. Sun, *Organizers*
D. Huber, *Organizer, Presiding*

8:00 . Chemically functionalized 2D materials for quantum photonic science and technology. **M.C. Hersam**

8:30 . Field driven nanoparticle organization in semicrystalline polymers. **L. Schadler**, S. Kumar, a.J. mueller, v. pai, s.R. Kalghatgi

9:00 . *Operando* probing dynamic evolution of nanocatalysts for CO_2 reduction. **Y. Yang**

9:30 Session Break.

9:40 . Emerging 2D and 3D patterning tools for manipulating colloidal matter and larger materials. **C.A. Mirkin**

10:10 . Developing mechanoluminescent nanocrystals for optogenetic neuromodulation. **Y. Yin**

10:40 . Inverse design of 3D DNA-programmable nanomaterials. **O. Gang**

11:10 . Phonon dynamics of self-assembled mechanical metamaterials from nanoparticles. **Q. Chen**

Georgia World Congress Center
B303

PUNC

Nanomaterials Research at Primarily Undergraduate Institutions

S. Hughes, C. Whitehead, *Organizers*
A. E. Gerdon, S. Mondal, *Presiding*

8:00 Opening Remarks.

8:05 . Metal-responsive nanoribbons and peptide-based hydrogels: Dual strategies for supramolecular material design. **C.M. Rubert Perez**

8:25 . Insights into successful hydrothermal synthesis of brookite TiO_2 Particles: From micro to nano. **O. Love**

8:45 . Size control of wurtzite $CuinS_2$ Nanoplatelets using functionalized aryl-substituted thioureas. **S. Hughes**, T.H. Edmunds

9:05 Break.

9:25 . Exploring the photophysics of a phenanthrene-derived triazole in non-ionic and ionic micellar environments. **D. Ghosh**, S.M. Landge, K.S. Aiken

9:45 . Interfacial dehydration by brines at oxide/water interfaces using second harmonic generation (SHG). **N.M. Gonzalez**, F. Geiger

10:05 . Nanoscale assault: Alterations in biofilm composition between NaCl nanoparticles and NaCl. E. Nardone, M. Gasper, J. de Miguel Solaguren, **M. Machado**

10:25 Break.

10:45 . Use of ω-aminoalkylsilane self-assembled monolayers in functionalized surfaces for applications in organic electronics and bacterial biofilm inhibition. **P. Lundin**

11:05 . Passive vs reactive nanoparticle ligands in sliding hydrogel interfaces. **M.B. Elinski**, G. Kozak, B. Hidalgo, A. Zini

11:25 . Mechanochemical synthesis of ultrathin metallic bismuth hexagonal nanosheet. **P. Lyu**, E. Stephens

Georgia World Congress Center
B304

Biomembrane Synthesis, Structure, Mechanics, and Dynamics

Biomembranes

R. Ashkar, S. Muralidharan, *Organizers*
J. Katsaras, M. Nieh, *Organizers, Presiding*

8:00 . Scalable assembly of size controlled giant unilamellar vesicles for *in vitro* and *in vivo* applications. **V. Vijayananda**, S. Tran, A. Subramaniam

8:20 . How model membrane composition shapes extracellular vesicle interactions. **J. Lin**, S. BHUNIA, S. Sun

8:40 . Investigating the sensitivity of hTIM4's cooperative membrane-binding for different levels of phosphatidylserine lipid exposure. **S. Hsieh**, S. Maltseva, D.H. Kerr, M. Turke, A. Gaffney, E.J. Adams, K.C. Lee

9:00 . Assembly and characterization of polymer gel-tethered lipid bilayer inside microfluidic system. **J. Jannat**, M. Page, F. Deiss, C. Naumann

9:20 . Structural and dynamical changes of biomembranes along the evolutionary pathways of sterols. **D. Hathnagoda**, S. Buti, T. Kumarage, C. Hetti Arachchige, R. Ashkar

9:40 Intermission.

10:00 . Making and breaking lipid membranes in synthetic cells. **N.K. Devaraj**

10:20 . Controlling the internal structure of lipid nanoparticles results in more efficient RNA therapeutics. **A. Kros**

10:40 . Lipid packing rules: Simplifying membrane complexity and predicting elasticity. T. Kumarage, S. Gupta, N.B. Morris, F.T. Doole, J. Katsaras, G. Khelashvili, M. Doktorova, M.F. Brown, **R. Ashkar**

11:00 . Molecular basis for learning and memory in droplet interface bilayers. **C.P. Collier**, J. Katsaras, C. Milem, J. Hagar-Montoya, D. Bolmatov, P. Podar

11:20 . Droplet-assisted assembly of polymer gel-supported lipid bilayer. J. Jannat, M. Page, H. Mann, K. Chuduang, F. Deiss, **C. Naumann**

11:40 . Dna-based tools for single molecule mechanobiology. **K. Salaita**, A. Foote

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 4

Recent Development of Polymer Surface/Interface and Polymer Thin Film Design, Preparation, Characterization, and Modeling

Polymer Interface Characterization and Medical Applications

Z. Chen, T. Wei, S. Zhao, *Organizers, Presiding*

8:00 Introduction.

8:10 . Atmospheric plasma enhanced chemical vapor deposition (PECVD) of metal organic gels and their surface characterization. **G. Olazabal**, P. Vieth, R. Davies, F. Hollmann, P. Miller

8:30 . Probing molecular structures of polymer adhesives and antifouling polymers at buried interfaces. **Z. Chen**

9:00 . Photochemical and photothermal pyrolysis of boron carbide from polymer precursors. **P. Vashishta**, N. Baradwaj, N. Dasgupta, R.K. Kalia, A. Nakano, A.C. Van Duin, B.J. Lear, R. Hickey

9:30 . Polymer thin film necking: Ductility from entanglements and plane stress condition. **T. Ge**, S. Zhang, Z. Cao, X. Gu

10:00 . Modeling of cationic metallopolymers to potentiate antibiotics via moduilating the efflux pump. **M. Uline**

10:30 . Tailoring the inert properties of zwitterionic coatings. **A. Rosenhahn**

11:00 . Zwitterionic surfactant interfaces for improved drug delivery. **Z. Cao**

11:30 . Surface chemistry of an acrylosilane-melamine based automotive clearcoat: chemical inertness vs reactivity. **S.H. Kim**, Y. Guo

SUNDAY AFTERNOON

Georgia World Congress Center
B314

Advanced In-Situ Imaging Methods for Colloidal Chemistry

Probing Interaction and Dynamics at the Nanoscale: In-situ Methods
Q. Chen, D. Li, Y. Xie, *Organizers*
J. D. Rimer, J. Yang, *Presiding*

2:00 . *In situ* scanning probe microscopy as a tool to uncover new mechanisms of (Non)classical crystallization. **J.D. Rimer**

2:30 . Observing the nanoaggregates in the electrolytes by small-angle X-ray scatterin. **T. Li**

3:00 . Toward autonomous liquid phase TEM: Physics-informed generative modeling and AI-assisted tracking of nanoparticle motion. **Z. Shabeeb**, V. Jamali

3:15 . Interfacial forces and solution structure control nanoparticle incorporation within growing crystals. **E. Nakouzi**, M. Zhang, K. Liu, D. Jang, V.J. Bernat, J. Chun, D. Li, U.B. Wiesner, L.A. Estroff

3:45 . Surface dynamics in the early stages of metal and alloy oxidation. **J. Yang**, M. Li, B. Lee, W. Saidi

4:15 . *Operando* EC-STEM probing dynamic evolution of nanocatalysts. **Y. Yang**

Georgia World Congress Center
B312

2026 Dong Qin ACS Award in Nanochemistry: Symposium in Honor of Luis Liz-Marzán

Assembly and Patterning

Y. Yin, *Organizer*
J. Perez-Juste, *Organizer, Presiding*
N. Liu, *Presiding*

2:00 . Engineering nanoparticles for organ targeting and therapeutic delivery. **F. Caruso**

2:30 . Learning under illumination: Structures revealed and tracked by color clock microscopy. **S.E. Skrabalak**

3:00 . Self-Assembly on the nano-bio interface. **Q. WANG**

3:30 Intermission.

4:00 . Colloidal chemistry approach for patterned *in situ* growth of plasmonic nanostructures. **L. Scarabelli**

4:30 . DNA moiré superlattices. **N. Liu**

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 3

Nanoparticle Materials

Synthesis and Self-Assembly: Nanoparticle Synthesis, Assembly and Characterizations

H. Fan, D. Huber, T. Li, Y. Sun, *Organizers*
Q. Chen, *Presiding*

2:00 . Nanostructures with chiral phonons. **N. Kotov**

2:30 . Toward a general strategy for self-assembly of nanoparticles and organic molecules in organic solvents. **E. Shevchenko**

3:00 . Mechanistic understanding of photochemical synthesis of gold nanoplates on substrates. **S. Neretina**, B. Nieukirk, R. Tang, D. Panda, R. Hughes

3:30 Session Break.

3:40 . Effect of nanodefects comprised of nanocolumnar and point defects in high-performance superconducting wires for large-scale applications in energy generation, transmission and storage. **A. Goyal**

4:10 . Surface forces in highly concentrated electrolytes. **R.M. Espinosa-Marzal**

4:40 . Understanding crystal growth, Assembly, and resulting structures via in-situ techniques. **D. Li**

5:10 . Colloids with multifunctional optical properties: Manufacture and assembly. **B.A. Korgel**

Georgia World Congress Center
B303

PUNC

Nanomaterials Research at Primarily Undergraduate Institutions

S. Hughes, C. Whitehead, *Organizers*
T. Le-Vasicek, A. C. Mensch, *Presiding*

2:00 Opening Remarks.

2:05 . Thiolated tridentate nitrogen donor ligands for gold nanoparticle stabilization and DNA interaction studies. **R. Sunasee**, R. Ando, J. Anan, M. Ainooson, C. Obuah, C.K. Adokoh

2:25 . Heavy metal ion sensing using water-soluble carbon quantum dots derived from polycarboxylic acids. H.I. Blair, R.E. Nemcek, **D.T. Miles**

2:45 . Detecting heavy metal ions using a ZnS-based quantum dot system. **C. Whitehead**

3:05 Break.

3:25 . Nanomaterial transformations in the environment: Implications for sediment deposition and biological interactions. **A.C. Mensch**, I.M. Allen, V.A. DeMaria, C. Tovar, S.R. Weibel, M.A. Bertucci

3:45 . Reactivity of phosphate alkoxides in a sol-gel system. **A. Gonzalez Camacho**, S. Brucks, J. Volkman, J. Soulie

4:05 . Aqueous synthesis of CdS quantum dots and exploring its application in optical sensing of protein. **S. Mondal**, H. Bishwakarma, C. Cobb

4:25 Break.

4:45 . Copper-paddlewheel MOF assembly within hierarchical architectures for gas capture and sensing. **M.E. Anderson**

5:05 . Removal of nanoparticles from solutions using functionalized mesoporous silica and activated carbon. **J.K. Mbindyo**, K. Martinez

5:25 . Fluorescence quenching of tetracycline in different milk matrices using the metal-organic framework (MOF) material NH_2-MIL-53(Al): Toward practical MOF-based food safety sensors. N. Oliveras, T. Chauhan, **A.H. Pinto**

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 4

Recent Development of Polymer Surface/Interface and Polymer Thin Film Design, Preparation, Characterization, and Modeling

Polymer Coating

Z. Chen, T. Wei, S. Zhao, *Organizers, Presiding*

2:00 Introduction.

2:10 . Environment-mediated reconfiguration of polar polymers. **M.J. Blake**, S. Kim, Z. Yang, H.M. Meyer III, S.T. Retterer, J. Carrillo, B. Doughty

2:30 . Functional coatings based on alternating copolymers featuring maleic anhydride. **J. Genzer**

3:00 . Innovative ice-shedding nades-containing coatings. **D.C. Webster**, G. Jena, O. Shafranska, E. Nissen

3:30 . Surface engineering at the nanoscale: From templated nanofiber networks to peptide nanofibers. **J. Lahann**

4:00 . Curvature-programmed polymer interfaces *via* condensed droplet polymerization. **R. Yang**

4:30 . Material-independent and well-defined catechol-based self-assembled monolayers. **J. Kim**

5:00 . Surface structures of linear and branched alkyl-side-chain polymer coatings. **G. Labrague**, J. Gan, R. Li, K. Tse, D. Carvajal, P. Khodaparast, D. Poirier, A. Gharachorlou, E. Ma, Z. Chen

5:20 . Nanometer-thick simultaneously hydrophilic/oleophobic coatings: From polymer to ionic liquid. **L. Li**

Georgia World Congress Center
B304

Biomembrane Synthesis, Structure, Mechanics, and Dynamics

Biomembranes

J. Katsaras, S. Muralidharan, *Organizers*
R. Ashkar, M. Nieh, *Organizers, Presiding*

2:00 . Surface-immobilized vesicles as a platform for measuring calcium-driven lipid redistribution and flip-flop using sum-frequency vibrational spectroscopy. P. Hymas, **J.C. Conboy**

2:20 . Probing in situ structures of membrane-associated Cytochrome P450 with and without FBD. **G. Wu**, W. Guo, P. Yang, R. Huang, A. Ramamoorthy, Z. Chen

2:40 . Lipid reorganization upon interaction with nanomaterials of different size, shape and rigidity. **E. Dormidontova**

3:00 . Impact of polymers on biomembrane properties and membrane localized events. **S. BHUNIA**, J. Lin, S. Sun

3:20 . Investigating the effects of honey on the spermatozoa plasma membrane and its structural relation to fertility using a langmuir monolayer model membrane system. **M.I. Bivolarov**, A. Goach

3:40 Intermission.

4:00 . Metabolic labeling of lipids in cells using clickable probes. **M. Best**, C. Ancajas, J. Lou, T. Ricks, Y. Zhou, T. Reynolds

4:20 . Electromechanically induced membrane restructuring enables learning and memory. **C.P. Collier**, P. Podar, D. Bolmatov, T. Kumarage, A. Adkisson, O. Ziemer, V. Sullivan, A. Mohamed, J. Najem, J. Katsaras

4:40 . Cholesterol is capable of modifying membrane ionic conductance. **J. Katsaras**, C.P. Collier, C. Milem, P. Podar, R. Ashkar, E. Watkins, X. Zhai, I. Gussev

5:00 . Effects of biofuel solvents on lipid membranes. L. Tan, M. Smith, S. Pingali, X. Cheng, H.M. O'Neill, J. Katsaras, J. Smith, B.H. Davison, **J.D. Nickels**

5:20 . Partitioning kinetics of small molecules and surfactants in gram-negative bacterial membranes. r. chockalingam, R. Vaiwala, N. Patil, **G.K. Ayappa**

5:40 Discussion and Concluding Remarks.

SUNDAY EVENING

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Active and Responsive Matter

A. Liu, *Organizer*

6:30 462. Surfactant based solid dispersion for enhancing the solubility and bioavailability of SUVN-8847. M. TS, N. Medidi, I. Kalaikadhiban, **D. Dhanunjay**, A. Shinde, R. Nirogi

6:30 463. Use of activated carbon derived from cassava peel modified with different metal nanoparticles applied in the electrochemical detection of free cyanide. **M.A. GARRIDO MANSILLA**

6:30 464. Withdrawn

6:30 . Withdrawn

6:30 465. Selective CO bond scission on beta-molybdenum carbide (β-Mo2C). **A. Ashrafian**, J. Kelber, A.A. Maruf, S. Amagbor, T. Golden, S. Ma

6:30 466. Scalable synthesis of ssDNA-functionalized gold and iron nanoparticles via RHEBM for targeted biosensing of *Escherichia coli* K-12. **A. Rodriguez**

6:30 467. Computational study of photocatalytic degradation of methylene blue on metal-organic framework–modified zinc oxide nanoparticles. **E. Pae**, J. Pokhrel, M. Smith

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Advanced In-Situ Imaging Methods for Colloidal Chemistry

Probing Interaction and Dynamics at the Nanoscale

Q. Chen, D. Li, Y. Xie, *Organizers*

6:30 234. Real-time fluorometric qualitative measurement of oxytetracycline injection in citrus plants using zinc sulfide quantum dot tattoos. **G. Diracca**, J. Pereira, M.M. Deinys, S. Santra

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Basic Research in Colloids, Surfactants and Interfaces

S. Hunyadi Murph, S. Kamdar, A. Mallia, U. Natarajan, Z. Niroobakhsh, *Organizers*

6:30 235. AOT in isooctane reverse micelles varying size and phase stability with amides: Comparison of urea, formamide, and acetamide. **J.L. Heitert**, Y. Virgen, Z. Posinski, J. Carbajal, **B.L. Gourley**, N.E. Levinger

6:30 236. Polyphenol-rich nanoparticles for stabilizing oxytetracycline at neutral ph for potential plant disease management. **M. Santra**, B. Demosthene, E.H. Kang

6:30 237. Morphology control of microfeatures in inkjet printing for security applications. **E.J. Simmons**, M. Tran, C. Jiang

6:30 238. Evaluating the catalytic efficiency of silver nanostars. **K. Harro**, D. Aligholizadeh, A. Lohse, **M. Devadas**

6:30 239. Characterizing critical micelle concentrations of emerging PFAS with dynamic light scattering. A. Foose, H. Collett, **J. Faust**

6:30 240. Molecular dynamics study on mechanical stability of Pickering emulsion confined in nanochannel. **S. Doniwa**, Y. Kobayashi, M. Yamakawa

6:30 241. Atomistic modeling of oil-water interfaces as a function of additives and surfactants. **N.C. Lok**, Z.T. Gardner, Q. Ai, C. Risko

6:30 242. Polyaniline nanosheet additives for improved corrosion protection. **A. Shukul**, C. Romero, T.W. Hanks

6:30 243. Oscillatory evaporative dynamics of aqueous polyethylene glycol droplets. **E. Williams-Derry**, K.E. Broaders

6:30 244. Aqueous-stable magnetic nanocrystals with compact coatings: Exchange dynamics as a guide for the design of nitrocatechol coatings. **J. Burrell**, A.B. Greytak

6:30 245. Turning heat into insight: Surfactant adsorption on gold nanoparticle facets with DART-TD-MS. **H. Ngo**, P.G. Van Patten, M. Zhang

6:30 246. Osmolyte impact on AOT reverse micelles in isooctane size, stability, and osmolyte-AOT headgroup interaction: Comparison of urea, formamide, and acetamide. **Z. Posinski**, Y. Virgen, J.L. Heitert, J. Carbajal, B.L. Gourley, N.E. Levinger

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Biomaterials and Biointerfaces
E. Andreescu, S. Aryal, C. P. Collier, S. Sinha Ray, V. Sundaram, *Organizers*

6:30 247. Highly oriented antibody conjugation to gold nanoparticles through various amino crosslinkers by microbial transglutaminase. **F.E. Breausche**, H. Barlow, E. Beitello, J.A. Friesen, J.D. Driskell

6:30 248. Biophysical consequences for exposure of model cell membranes to perfluoroalkyl substances. **J. Said**, S. Lee

6:30 249. Membrane-Modifying effects of perfluoroalkyl substances in model bacterial membranes. **E. Andersen**, S. Lee

6:30 250. Withdrawn

6:30 251. Polysulfide-conjugated antimicrobial clay as a sustainable tool for crop protection. **P. Maiti**, J. Pereira, S. Santra

6:30 252. Withdrawn

6:30 253. Assembling DNA origami arrays to control calcium phosphate mineralization. **G. Kazis**, A.E. Gerdon

6:30 254. Assessment of oxytetracycline stability and physicochemical properties in a near-neutral pH adjuvant. **U. Mohammad**, M. Deinys, S. Ben Abdallah, J. Pereira, S. Santra

6:30 255. Withdrawn

6:30 256. Exploring the holdase mechanism of supramolecular chaperone mimics. **E. Piedmont**, M.A. Young, B.E. Partridge

6:30 257. Natural selection via prism of the animal magnetism to maintain life-cycle at the variation of the circumstances of the habitat. **M.A. Lisunova**

6:30 258. Broad-spectrum antibacterial and antibiofilm coatings for urinary catheters using layer-by-layer assembly of functional bio-based nanoparticles. **A. Puertas**, S. Stolfo, K. Ivanova, T. Tzanov

6:30 259. Orientation distribution of β sheet domains in silk fiber studied with vibrational sum frequency generationspectroscopy. **J. Ryu**, s.H. Kim

6:30 260. Engineering a core-shell MOF@LDH nanostructure decorated with N, S-codoped graphene quantum dots for high-performance electrochemical biosensing. **T. Nguyen**, J. Hsieh

6:30 261. Overcoming bacterial cell membrane-wall and biofilm resistance mechanisms with carbon-based phosphatase-like nanozyme particles. **E. Asare**

6:30 . Withdrawn

6:30 262. Photochemically engineered silver nanotriangles for targeted imaging of triple-negative breast cancer. **M.R. Mackiewicz**

6:30 263. Bisphosphonate hydrogels as a potential alternative to alginate gels. **A.J. van der Vlies**, B. Han, U. Hasegawa

6:30 264. Scalable ultrasonic-assisted coating of PDDA-based polymer dots for wash-durable antibacterial textiles. **J. Blair**, G. Rathee, A. Puertas, T. Tzanov

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Biomembrane Synthesis, Structure, Mechanics, and Dynamics

R. Ashkar, J. Katsaras, S. Muralidharan, M. Nieh, A. N. Parikh, *Organizers*

6:30 265. Development of ROS-triggered molecular platforms for modeling signal transduction using a tandem self-immolative strategy. **K. Shahriar**, M. Qualls, M. Best

6:30 266. Engineering tunable small molecule-responsive liposomes through liposomal membrane modulation using a synthetic lipid switch. **B.E. Smith**, C.G. Russell, M.B. Mustafa, M. Best

6:30 267. Thiol-responsive lipid development for effective liposome triggered cargo release. **M. Ullah**, M. Best

6:30 268. Langmuir monolayer skin cell model membranes and optical density growth curves indicate that a bioactive component of bee propolis, cape, has antibacterial activity. **I.E. Hawkins**, A. Goach

6:30 269. Development of ROS-triggered masked liposomes for activated cellular delivery using a charge balance strategy. **M. Mustafa**, J. Lou, M. Phillips, R. Turner, J.A. Baccile, M. Best

6:30 270. Effect of kelulut honey on fluidizing model liver cell membranes and on the structure of insulin. **A.R. Earle**, A. Goach

6:30 271. Characterizing the permeability of abiotic protocells using fluorescence decay using high-throughput methodoloy. **A. Glagovich**, S.E. Maurer

6:30 272. Biosynthesis of deuterated lipids for characterization of biomembranes and membrane proteins. **Q. Zhang**, H. Zhang, W. Leite, K.L. Weiss, A. Hicks, S. Pingali, V. Urban, H.M. O'Neill

6:30 273. Time-resolved X-ray scattering reveals ultrafast structural changes of rhodopsin. **M.F. Brown**, T.D. Grant, S. Perera, L. Salas-Estrada, A.V. Struts, U. Chawla, S. Fried, C.K. Menon, N. Weerasinghe, K. Karpos, D. Meza, A. Grossfield, D. Mendez, P. Fromme, R.A. Kirian

6:30 274. Amphiphilic co-solvents alter lateral membrane organization. **L. Tan**, H. Scott, M.D. Smith, S. Pingali, X. Cheng, H.M. O'Neill, J. Katsaras, J. Smith, B.H. Davison, J.D. Nickels

6:30 335. Deuterium NMR reveals cholesterol-induced packing control of bending energy. **M.N. Arruda**, T.R. Molugu, S. Chakraborty, A.V. Struts, H.I. Petrache, M. Doktorova, R. Ashkar, M.F. Brown

6:30 336. Rhodopsin is the hydrogen atom of biophysics. **E.W. Cheng**, Z.T. Bachler, M.N. Arruda, C.K. Menon, A.V. Barmasov, A.V. Struts, M.F. Brown

6:30 337. Polymer osmolytes and membrane protein hydration: Insights from molecular dynamics simulations. **L.E. Thaller**, C. Menon, T. Huber, A.V. Struts, E.W. Cheng, Z.T. Bachler, s. Perera, T. Sakmar, **M.F. Brown**

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Colloidal Semiconductor Nanocrystals (Including Perovskite Nanocrystals)

J. Macdonald, *Organizer, Presiding*
O. Chen, *Presiding*

6:30 338. Gradient alloyed CdTe/CdSe/$Cd_xZn_{1-x}Se$/$ZnSe_yS_{1-y}$/ZnS core-multishell quantum dots for enhanced near infrared emission in bioimaging and optoelectronics. **A.M. Adeboyejo**, I. Fedin

6:30 339. Sn^{4+}-induced blue emission enhancement in ultrathin perovskite nanowires via post-synthetic cation exchange. **Y. Liu**, Z. Liu, R. Wu, O. Chen

6:30 340. Improving the photoluminescence quantum yield of near-IR-emitting Cd_3P_2 QDs with the appropriate selection of surface ligands. **S. Jannat**, I. Fedin

6:30 341. Droplet-based microreactor synthesis of $CsPbI_3$ quantum dots with multifunctional ligand for enhanced stability and optical performance. **h. wang**

6:30 342. Novel top-down synthesis of aluminum-based quantum dots for sensing applications. **A. Lloyd**, J. Pereira, M. Barry, S. Santra

6:30 343. Stepwise cation exchange through vacancy-stabilized intermediates in chalcogenide nanostructures. **S. MISHRA**, X. Li

6:30 344. Plasmon enhanced near infrared random lasing of $CuInS_2$ quantum dots with $Cu_{2-x}S$ plasmonic semiconductor nanocrystals. **S. Ortiz**, S. Arnold, J. Kuszynski

6:30 345. Defect engineering and processing routes for plasmonic control in Cd_2SnO_4 colloidal nanocrystals. **M. Amane**, G.F. Strouse

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Fundamental Research in Colloids, Surfaces and Nanomaterials

S. Hunyadi Murph, J. Katsaras, U. Natarajan, *Organizers*

6:30 346. Development of a rapid method to crosslink insulin and assess stability. **E. Texaj Fuentes**, T. Vasicek

6:30 347. Enhanced immobilized enzyme stability during recycling with use of long linkers. **T. Le-Vasicek**

6:30 348. Glutaraldehyde facilitated enzyme immobilization: Assessment of particle crosslinking. **R. Mendez-Garcia**, T. Le-Vasicek

6:30 349. Post-synthetic modification of cu-bdc surmof thin film morphology. **S.J. Delozier**, M.E. Anderson

6:30 350. Selective MRSA biofilm eradication via bismuth selenide unique layered structure. **O. Kolawole**, A. Pramanik, P.C. Ray

6:30 351. Synthesis of red-emissive carbon dots from benzothiazoline salts for bioimaging. **A. Joji**, K.L. Pyait, R.M. Leblanc

6:30 352. Cellulase immobilization efficiency: Dependence on magnetic nanoparticle size. **T. Piwowar**, T. Le-Vasicek

6:30 353. Scanning for order: Can R-2-butanol behave on Ni(111)?. **J. Ashra**, K.B. Weinstock, A.C. Shepherd, J. Whitted, A. Baber

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Nanomaterials

J. A. Hollingsworth, S. Hunyadi Murph, S. Lim, R. Nagarajan, C. M. Sims, D. Watkins, *Organizers*

6:30 354. Absorption and emission comparisons of AuNP-R6G and AuNP-CQD to achieve random lasing. **S. Jones**, D. Murphy, **A.J. Shipp**, J. Kuszynski

6:30 355. Synthesis of fisheye nanocage composed of intact Ag nanocubes with interior gaps. **T. Ogunrinola**, Y. Bao

6:30 356. Hot spots matter: Designing SERS-active substrates for trace detection. **E. Owie**, D. Aligholizadeh, K. Harro, **M. Devadas**

6:30 357. Efficient encapsulation and release of hydrophilic substances from silica nanocapsules. **P. Preedanorawut**, D. Crespy

6:30 358. Understanding the kinetic aspects responsible for the formation of 3-aminophenol-formaldehyde resin beads with different morphologies. **J. He**, Y. Xia

6:30 359. AuCu nanodendrite for enhancing electrocatalytic nitrate reduction *via* two-stage microfluidic fabrication strategy. **J. Yongqi**

6:30 360. Trimetallic Pd@Pt_xAu_{1-x} core-shell nanocubes with enhanced selectivity toward H_2O_2 for the oxygen reduction reaction. **Z. Wang**, K. Li, Y. Ding, Y. Xia

6:30 361. Bifunctional rh dendritic nanostructures for efficient hydrazine-assisted water splitting. **J. Guan**, K. Li, Y. Ding, Z. Wang, Y. Xia

6:30 362. Interplay between interaction anisotropy and geometrical confinement on nanofluid thermal conductivity using molecular dynamics simulation. **K. Uda**, Y. Kobayashi, T. Ikeda, M. Yamakawa

6:30 363. Exploiting a peg:pcl micelle-in-gel platform for synergistic, localized co-delivery of betulinic acid and docetaxel against melanoma. **B.N. Saren**, S. Jain, D. Kurrewar, V. Yadav

6:30 364. Synthesis and characterization of N-heterocyclic carbene ligated gold nanoparticles via solution-state NMR. **R.S. Millsaps**, G. Kaur, D.M. Jenkins

6:30 365. Withdrawn

6:30 366. Tuning colloidal stability and drug loading in egain nanoparticles *via* cyclodextrin-based surface functionalization. **S. Gokalp**, S. Khani, M. Gayed, M.C. Foster

6:30 367. *N*-heterocyclic olefins for gold nanoparticle functionalization. **A. Mahar**, K.A. Schulmeister, J.P. Camden, D.M. Jenkins

6:30 368. Enhancement of single-walled carbon nanotube fluorescence from phonon sideband excitation. **J. Miller**, I. Hwang, M. Kim

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Nanoparticle Materials

Synthesis and Self-Assembly: Nanoparticle Synthesis and Assembly

H. Fan, D. Huber, T. Li, Y. Sun, *Organizers*

6:30 456. Chiral gold tetracuspid synthesis through non-amino acid-induced chiral evolution. **L. Zeyuan**

6:30 457. Engineering anisotropic octopod-type nanoparticles. **N. Uiyoshioria**, D. Aligholizadeh, L. Frimpong, A. Lohse, K. Harro, **M. Devadas**

6:30 458. Effects of surfactant identity and concentration on nanoparticle purification by depletion flocculation. **N. Santana-Venegas**, **A. Smies**, K.J. Gibson

6:30 459. Controlled release of plant micronutrients via stimuli-responsive self-assembled polyphenolic nanodelivery system. **G. Phuyal**, J. Pereira, S. Santra

6:30 460. Histidine-containing tri-peptide hydrogels as alternative proton transfer materials for fuel cell applications. **B.C. Singh**, R. Barretto-Sanchez, S. Pollozi, M.A. Modestino, D.M. McGregor

6:30 461. Real-time monitoring and control of colloidal crystals using DNA-modified gold nanoparticles. **A. Benton**, **M. Davis**, K.J. Gibson

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

PUNC

Nanomaterials Research at Primarily Undergraduate Institutions

S. Hughes, C. Whitehead, *Organizers*

6:30 369. Controlled synthesis of anisotropic silver nanoparticles using molecular shape directing agents. **L. Frimpong**, D. Aligholizadeh, N. Uiyoshioria, **M. Devadas**

6:30 370. Impact of per- and polyfluoroalkyl substances and polystyrene nanoparticles on solid-supported lipid bilayers. **I.M. Allen**, A.C. Mensch

6:30 371. Effect of Cu^{2+} doping concentration on the photodegradation activity of brookite-phase TiO_2 Nanoparticles. **A. Foreman**, O. Love

6:30 372. Modeling isomeric butanol reaction pathways on TiO_2/Au(111) inverse model catalysts. **E.M. Euler**, H.E. Frankovich, K. Letchworth-Weaver, A. Baber

6:30 373. Quantifying polymer adsorption onto gold nanoparticles with static and dynamic surfactant chemistries. **C.C. Grubb**, L.B. Thompson

6:30 374. Fluorescently labeled cnc as sustainable nanomaterials for immunomodulatory applications: Design, characterization and toxicity. **S. Marte Velez**, B. Short, M. Seeber, S. Moryani, K. Ckless, R. Sunasee

6:30 375. Examining the photophysics of a class of triazole molecules in drug delivery systems. **S. Dutko**

6:30 376. Optimized synthesis and characterization of ZnMnS for environmental and biochemical applications. **P. Barnes**, S. Livingston, C. Whitehead

6:30 377. Exploring the impacts of AuNP surface charge on the secondary structure of BSA. **T. Saha**, S.E. Lohse, L.B. Thompson

6:30 378. The relationship between ligand length and the binding of ligands to the surface of cesium lead bromide nanocrystals. **A. Pentland**, C. Beimborn

6:30 379. Mechanochemical synthesis of metallic bismuth hexagonal nanosheet. **E. Stephens**, P. Lyu

6:30 380. Impact of pristine and transformed polystyrene nanoparticles on *B. subtilis* viability. **V. DeMaria**, C. Tovar, S.R. Weibel, M.A. Bertucci, A.C. Mensch

6:30 381. Regioselectivity of Cd^{2+} cation exchange following Te^{2-} Anion exchange on $Cu_{2-x}S$ nanorods. **C. Nguyen Dinh**, E.V. Rudman, C. Doligon, N. Ehrenberg, A. Konicki, H. Brown, K. Plass

6:30 382. Metal ion sensing using carbon quantum dots. **H. Blair**, D.T. Miles

6:30 383. ZnS-based quantum dots: synthetic adventures and heavy metal applications. **A. Uppal**, M. Abakah-Quianoo, C. Whitehead

6:30 384. Spectroscopic analysis of surfactants and polycyclic aromatic hydrocarbons in crude oil. **Y. Ndiaye**, D. Ghosh

6:30 385. Building a modular framework of post-synthetic transformations for rational nanoparticle design. **B. Macy**, J. Collie, K. Plass

6:30 386. Photocatalytic degradation of PFOA using Cu^{2+}-doped brookite TiO_2 nanoparticles. **H. McFadden**, O. Love

6:30 387. Cyclodextrin inclusion complex with organic molecules capped silver nanoparticles in metal ion detection. **S.B. Poudel**, D. Ghosh

6:30 388. Green synthesis of enantioselective silver nanoparticle sensors. **R. Patterson**, K. Stefaniak

6:30 435. Characterizing ligand binding and decomposition pathways on functionalized gold nanoparticles. **A.S. Soto Carrillo**, E.J. Robertson

6:30 436. What is driving Se^{2-} Anion exchange on $Cu_{2-x}S$ nanoparticles?. **M. Boleychuk**, Q. Boussard, E. Sandoval-Arteaga, M. Topiwala, E. Paul, N. Kuntipuram, K. Plass

6:30 437. Effects of climate change and gold nanoparticle pollution on tadpole metamorphosis. **K.C. Banks**, P.P. Fong, L.B. Thompson

6:30 438. Small molecule adsorption on oxide nanoparticles in differing water chemistries. **I. Tejada**, A.C. Mensch

6:30 439. Investigating the size dependency on optical properties for citric acid and ethylenediamine polymeric carbon dots. **G. Gagnon**, A.E. Gerdon

6:30 440. Mechanochemical synthesis of 2D halide lead perovskite. **C. Thurman**, E. Stephens, P. Lyu

6:30 441. Tailoring the photocatalytic properties of brookite TiO_2 Through Co^{2+} And Cu^{2+} surface doping. **L. Antonescu**, P. Lyu, O. Love

6:30 442. Synthesis of silver nanoparticles using synthetically modified amino acids as reducing and capping agents. **K. Portillo**, K.R. Stefaniak, C.J. Monceaux

6:30 443. Withdrawn

6:30 444. Effects of microplastics and nanoplastics on macroalgae. **M. Hall**, M. Machado

6:30 445. Bottom-up fabrication of copper nanoparticle arrays on functionalized surfaces for electrocatalytic applications. **E. Diakiw**, L. Korkomaz, K. Bandyopadhyay

6:30 446. Synthesis of gold nanobipyramid based nanorattles with rough surfaces facilitated by ligands. **S. Deranleau**, G. Cooper, O. Vause, Y. Bao

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Recent Development of Polymer Surface/Interface and Polymer Thin Film Design, Preparation, Characterization, and Modeling

Z. Chen, T. Wei, S. Zhao, *Organizers*

6:30 447. Development of model moisture-cure silicone elastomers for ideal fouling release investigations. **A. Rathnayake**, D. Boucher, D.C. Webster

6:30 448. Moisture-curable hybrid urea-siloxane coatings for large scale ice shedding properties via surface self-segregation. **V. Mishra**, G. Jena, D. Boucher, D.C. Webster

6:30 449. Engineering silicone based bi-layer coating for large scale ice-shedding applications. **G. Jena**, D. Boucher, V. Mishra, M. Safaripour, D.C. Webster

6:30 . Withdrawn

6:30 450. Sustainable hybrid epoxy coatings with bio-based flame-retardant systems and functional fillers. **N. Hullenahalli Gangadhar**, M.A. Quadir, D.C. Webster

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Surface Chemistry

A. V. Teplyakov, L. Tribe, *Organizers*

6:30 451. Reactivity and selectivity of nucleophiles under mechanochemical conditions. **P. Burch**, S. Skejovic, D. Esselfie, M. Marianski, A.B. Braunschweig

6:30 452. Microsolvation and interfacial organization of triarylmethane dyes at the air-water interface. **I. Sooriyabandara**, N.V. Tkachenko

6:30 453. Synthesis, surface attachment, and electrochemical behavior of rhenium hydrides. **M. Aghamolaee**

6:30 454. Siloxane-based surfactants: Synthesis, characterization, and application in PFAS-free firefighting foam stability. **R.H. Franjul**, J.P. Youngblood, C. Martinez

6:30 455. Selective catalytic epoxidation of ethylene on Ag/Cu(111). **K. Weinstock**, J. Whitted, A.C. Shepherd, J. Ashra, E.M. Euler, D. Compton, A. Baber

MONDAY MORNING

Georgia World Congress Center
B304

Advanced In-Situ Imaging Methods for Colloidal Chemistry

Probing Interaction and Dynamics at the Nanoscale: Energy Materials
Q. Chen, D. Li, Y. Xie, *Organizers*
K. He, L. Luo, X. Ye, *Presiding*

8:00 . Atomic-scale insights into hydrogen trapping and grain boundary dynamics in metal nanostructures. **P.V. Sushko**

8:30 . Withdrawn

9:00 . Modulating nanoscale motion in LPTEM through ion driven screening of nanoparticle-surface interactions. **I. Panicker**, Z. Shabeeb, C. Hargugs, V. Jamali

9:15 . Engineering of colloidal nanocrystals for multifunctional coatings. **H. Fan**

9:45 . *In Situ* TEM of colloidal nanoparticles for sustainable energy applications. **K. He**

10:15 . Well-defined metal oxide nanocrystals for electrocatalytic applications. **X. Ye**

Georgia World Congress Center
B303

2026 Dong Qin ACS Award in Nanochemistry: Symposium in Honor of Luis Liz-Marzán

Property and Application

Y. Yin, *Organizer*
J. Perez-Juste, *Organizer, Presiding*
W. J. Parak, *Presiding*

8:00 . Biomedical research with chiral nanostructures. **N. Kotov**

8:30 . Materials development and characterization of colloidal nanoparticles towards applications in life science. **W.J. Parak**

9:00 . Hyperspectral imaging for geometry reconstruction of anisotropic and chiral plasmonic nanostructures. **D.S. Ginger**

9:30 Intermission.

10:00 . Electronic structure theory for describing photocatalysis and SERS. **G.C. Schatz**

10:30 . Chemical plasmonics with colloidal metal nanostructures. **J.M. Nam**

11:00 . Diffusion of nanoparticles in polymer matrices. **X. Chen**

Georgia World Congress Center
C209

Nanoparticle Materials

Synthesis and Self-Assembly: Nanoparticle Synthesis, Assembly and Applications

H. Fan, D. Huber, Y. Sun, *Organizers*
T. Li, *Organizer, Presiding*

8:00 . Gas-phase-synthesized graphene for conductive polymer nanocomposites. **A. Dato**

8:30 . From gold to silver: Scalable synthesis and functionalization of uniform, size- and shape-tunable nanostructures for advanced platforms. **K. Park**, A. Worku, R.A. Vaia

9:00 . High throughput measurement of the lyotropic liquid crystal phases of commercial alcohol alkoxylate surfactants. **D. Miller**, A. Jayaraman, K. Calderone, R. Balaj, W. Yu, K. Joseph, T. Young, T. Fitzgibbons, M.K. Mahanthappa, Z. Bauer

9:30 Session Break.

9:40 . Investigating structural properties of finite-sized colloidal assemblies using machine learning. Z.T. Mentzer, H.E. Brotman, **M.B. Zanjani**

10:00 . Pattern diversity emerges from polymer patching on shape-evolving gold nanoparticles. **J. Kim**, C. Kim, S. Kannur, J. Lee, C. Hwang, L. Li, N. Kotov, S.C. Glotzer, Q. Chen

10:20 . Tunable bimetallic Au–Pd nanorods: Linking morphology to synergistic effects in electrocatalysis. **S. Mandal**, Z. Lyu, J.R. Crockett, Q. Chen

10:40 . One-step fabrication of mono- to multilayer plasmonic nanoparticle assemblies for surface-enhanced Raman spectroscopy. **m. haddadnezhad**, L. Casto

11:00 . Anisotropic growth of magnetic layered zeolitic imidazolate frameworks and magnetic field-templated chain assemblies. **V. Poliukhova**, J. Jeon, H. Huang, H. Cook, V.V. Tsukruk

11:20 . Size and loading effects on the dielectric properties of barium titanate:pdms nanocomposites. **R. De Santos**, C. Hernandez, G. Jesse, B. Harsch, E. Hernandez, A. Dato, T. Monson, R. Van Ginhoven

11:40 . Peg coated gadolinium doped iron oxide nanorods for enhanced magnetic hyperthermia applications. **E.A. Odion**, S. Laha, T. Mefford

Georgia World Congress Center
B209

Recent Development of Polymer Surface/Interface and Polymer Thin Film Design, Preparation, Characterization, and Modeling

Antifouling and Anti-icing Polymers

Z. Chen, T. Wei, S. Zhao, *Organizers, Presiding*

8:00 Introduction.

8:10 . Interfacial characteristics of various Antifouling/Fouling release Coatings. **F. Gomez**, G. Wu, M. Safaripour, T. Li, D.C. Webster, Z. Chen

8:30 . Molecular mechanisms of antifouling in zwitterionic materials. **T. Wei**

9:00 . Zwitterglass films: Glassy ultrathin polyelectrolyte complexes. **J.B. Schlenoff**, J. Akintola, Z. Digby, Y. Chen

9:30 . Surface modifying additives to produce antifouling silicones for medical devices. **M. Grunlan**

10:00 . Modeling sequence-driven adhesion in mussel-inspired peptides. **J. Wu**

10:30 . Wear-resistant bilayer surface design for scale-independent de-icing. **A. Tuteja**

11:00 . Mixing and matching: Amphiphilic polyampholytes and polyelectrolyte complexes that mimic zwitterionic behavior for membrane applications. **A. Asatekin**

11:30 . Zwitterionic polymers for antifouling surfaces in soft devices. **A. Pena-Francesch**

MONDAY AFTERNOON

Georgia World Congress Center
B303

2026 Dong Qin ACS Award in Nanochemistry: Symposium in Honor of Luis Liz-Marzán

Property and Application

J. Perez-Juste, *Organizer*
Y. Yin, *Organizer, Presiding*
Y. Sun, *Presiding*

2:00 . Stars and spikes of gold nanoparticles. **T. Odom**

2:30 . Evaluating the catalytic activity of proteases using aunp–peptide conjugates. Z. Jin, N. Dridi, Q.A. Sang, **H.M. Mattoussi**

3:00 Intermission.

3:20 . Ultrafast laser-mediated synthesis of colloidal nanoalloys. **A. Guerrero-Martínez**

3:50 . Photocatalytic desulfurization promoted by white oxide nanoparticles. **Y. Sun**

Georgia World Congress Center
B304

Advanced In-Situ Imaging Methods for Colloidal Chemistry

Probing Interaction and Dynamics at the Nanoscale: Energy Materials

Q. Chen, D. Li, Y. Xie, *Organizers*
M. R. Jones, Y. Li, *Presiding*

2:00 . *In situ* STEM for energy and catalysis nanomaterials. **J. Arbiol**

2:30 . New cryo-EM tools for studying dynamic interfaces in battery materials. **Y. Li**

3:00 . Withdrawn

3:15 . Leveraging in situ transmission electron microscopy to understand nanoscale structural dynamics during electrochemical operation. **I.A. Moreno-Hernandez**

3:45 . Understanding symmetry breaking in nanoparticle superlattice-based phase transformations via *in-situ* methods. **M.R. Jones**

Georgia World Congress Center
C209

Nanoparticle Materials

Synthesis and Self-Assembly: Nanoparticle Synthesis and Applications

H. Fan, D. Huber, T. Li, Y. Sun, *Organizers*
K. Park, *Presiding*

2:00 . Withdrawn

2:20 . Crystallization of calcium oxalate in presence of citrate and ni ions. **P. Rehak**, P. Kral

2:40 . Nanoparticle coalescence as a strategy for Shape-Controlled synthesis of colloidal nanocrystals in the liquid phase. **S. Thennakoon**, M. Zamkov

3:00 . Co-Assembly dynamics of cellulose nanocrystals and gold nanorods: Mechanistic insights for chiroptical plasmonic materials. J. Hou, W. Sampson, **A. Dumanli**

3:20 . Dopant-directed surface energy modulation for controlled growth and color-tunable photoluminescence in 2D nanoplatelets. **V. Vanshika**

3:40 Session Break.

3:50 . Tunable plasmonic circular dichroism of hierarchical chiral assemblies and their wavelength dependent differential amplification of Raman scattering. **J. Perez-Juste**

4:10 . Putting uniform gold nanospheres for electrochemical catalyses. **K. Li**, J. He, Y. Xia

4:30 . Plasmon-assisted directional assembly of functionalized gold nanorods. **E. Dadashzadeh Asl**, M.K. Gangishetty

4:50 . Low-temperature route to various nanosize Fe_xN and Fe_xNi_yN nitrides for catalytic applications. A. Gonzalez Rosell, S. O'Leary, D. Leonard, S. Diaz Abad, **S. Ivanov**, J. Watt

5:10 . Exploring structure:property relationships in electrically conductive carbon-filled thermoplastic nanocomposites. **X. Deng**, A. Dato

5:30 . Ultrasonic-driven omni-directional assembly of 2D single-crystalline copper nanosheets for conductive films on complex geometries. **S. KIM**, H.K. Choi, Y. Song, M. Seo, H. lee, S. Bae, B.J. Moon, S. Lee, S.H. Lee, T. Kim

Georgia World Congress Center
B209

Recent Development of Polymer Surface/Interface and Polymer Thin Film Design, Preparation, Characterization, and Modeling

Polymer-Biological Media Interactions

Z. Chen, T. Wei, S. Zhao, *Organizers, Presiding*

2:00 Introduction.

2:10 . Atomistic simulations of PFAS-polystyrene nanoplastic complex formation and adsorption on phospholipid membranes. **J. Fang**, T. Qiao, P. Sarker, X. Qin, S. Zheng, T. Wei

2:30 . Engineered conducting polymer interfaces for biological applications: From molecular recognition to bioelectronic platforms. **P. Chen**

3:00 . Probing the interactions between functionalized nanomaterials and cell membrane/cell wall with multi-scale computations. **Q. Cui**

3:30 . On the role of surfactants in the stabilization of proteins for biopharmaceutical formulations. **M. Kellermeier**, C. Schneider, M. Rückel, N. Löw, Z. Chen

4:00 . Biphasic catalysis using enzyme based interfacial assembly for terminal alkene production. **Q. Wang**

4:30 . Wrinkled polymer thin films as dynamic interfaces for controlling biological interactions. **J. Min**

5:00 . Hydration and antibiofouling behaviors of zwitterionic sulfobetaine methacrylate polymer surfaces studied with atomistic simulations. **X. Qin**, P. Sarker, J. Fang, T. Wei

5:20 . Determining mechanisms of barnacle biofouling through probing the peptide oligomer/polymer interface *in situ*. **Z. Gandhi**, S. Zhang, A. Laverty, J. Mallick, T. Wei, Z. Chen

5:40 . Topological design of bottlebrush polymer surfactants with machine learning and simulations. **J. Carden**, N. Islam, Y. An

MONDAY EVENING

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

COLL Sci-Mix

8:00 267. Label-free electrochemical immunosensor for lysozyme detection using tunable gold nanostructured electrode. **S. Maparathne**, T. Lee

8:00 268. Use of activated carbon derived from cassava peel modified with different metal nanoparticles applied in the electrochemical detection of free cyanide. **M.A. GARRIDO MANSILLA**

8:00 269. Electric field driven flowing nanoparticle superlattice under liquid-phase transmission electron microscopy. **Z. Wang**, Q. Chen

8:00 270. Investigating the effects of macromolecular crowding on the mechanism of protein–polymer complex coacervation. **S. Biswas**, A.Y. Xu, S. Pingali, X. Zuo, K.T. Tran

8:00 271. Essential role of concave structures for stable superhydrophobic surface. **J. Lee**, J. Park, K. Jeong, S. Lee, J. Lee, S. Wooh, D. Lee

8:00 272. Engineering 'liquid-like' solid coatings with nitric oxide-release to combat biofouling of medical devices. **A. Shome**, R. Pandey, I. Martinez, N. Crutchfield, E.J. Brisbois, H. Handa

8:00 273. Ultra high concentration antibody formulations enabled via thermostable ionic liquids. **M. Erdi**, A. Ramesh, S. Zhang, V.C. Suja, S. Mitragotri, B. Singh

8:00 274. Pluronic bilayer-stabilized emulsions with tunable material properties as a living material with size-selective transport. **S. West**, A. Fica, A. Antony, T. Savargaonkar, M.G. Goren, K. Potter, M. Benyamin, S. Zilko, E. Fisher, D. Kheyroolla, A. Kretzschmar, R. Varma, D. Mavridou, M. Kumar, A. Rosales

8:00 335. Sequence-encoded bio-interactions: Decoding DNA surface chemistry effects on swcnt intracellular processing, nanotoxicity, and intracellular stress pathways. **A. Nadeem**, T. Xu, J.S. Gray, M. Kim

8:00 336. Investigating the sensitivity of hTIM4's cooperative membrane-binding for different levels of phosphatidylserine lipid exposure. **S. Hsieh**, S. Maltseva, D.H. Kerr, M. Turke, A. Gaffney, E.J. Adams, K.C. Lee

8:00 337. Probing in situ structures of membrane-associated Cytochrome P450 with and without FBD. **G. Wu**, W. Guo, P. Yang, R. Huang, A. Ramamoorthy, Z. Chen

8:00 338. Insights into ligand-controlled phonon dynamics in $CsPbBr_3$ nNanocrystals via machine learning potentials. **S. Cha**, C. Wang, V. Fung, G. Hu

8:00 339. Complementary *P* And *N* Type nanocrystal inks based on $agbis_2$ For solution processable optoelectronics. **A. Shaker**, N. Jayasekara, A.B. Greytak

8:00 340. Towards regioselectivity in ligand exchange on semiconducting nanocrystals. **M. ISLAM**, A.B. Greytak

8:00 341. Photo-dynamics of azobenzene under molecular confinement. **G. Lee**, J. Lee, J. Park, J. Park, D. Lee

8:00 342. Surface structures of linear and branched alkyl-side-chain polymer coatings. **G. Labrague**, J. Gan, R. Li, K. Tse, D. Carvajal, P. Khodaparast, D. Poirier, A. Gharachorlou, E. Ma, Z. Chen

8:00 343. Atomistic simulations of PFAS-polystyrene nanoplastic complex formation and adsorption on phospholipid membranes. **J. Fang**, T. Qiao, P. Sarker, X. Qin, S. Zheng, T. Wei

8:00 344. Novel structure formation of hybrid chiral biomolecular crystals and nanosurface systems. **P. Rehak**, P. Kral

8:00 379. One-step fabrication of mono- to multilayer plasmonic nanoparticle assemblies for surface-enhanced Raman spectroscopy. **m. haddadnezhad**, L. Casto

8:00 380. Peg coated gadolinium doped iron oxide nanorods for enhanced magnetic hyperthermia applications. **E.A. Odion**, S. Laha, T. Mefford

8:00 381. Putting uniform gold nanospheres for electrochemical catalyses. **K. Li**, J. He, Y. Xia

8:00 382. Nucleic acid-powered motors as biosensors to detect transient biomolecular interactions. **J. Hardin**, Y. Imtiaz, K. Salaita

8:00 383. Structure and morphology of amyloid-like protein fibrils in organic media. **A.E. Ashmar**, D. Chan

8:00 384. Withdrawn

8:00 385. AOT in isooctane reverse micelles varying size and phase stability with amides: Comparison of urea, formamide, and acetamide. **J.L. Heitert**, Y. Virgen, Z. Posinski, J. Carbajal, **B.L. Gourley**, N.E. Levinger

8:00 386. Polyaniline nanosheet additives for improved corrosion protection. **A. Shukul**, C. Romero, T.W. Hanks

8:00 387. Turning heat into insight: Surfactant adsorption on gold nanoparticle facets with DART-TD-MS. **H. Ngo**, P.G. Van Patten, M. Zhang

8:00 388. Exploring the holdase mechanism of supramolecular chaperone mimics. **E. Piedmont**, M.A. Young, B.E. Partridge

8:00 435. Assembling DNA origami arrays to control calcium phosphate mineralization. **G. Kazis**, A.E. Gerdon

8:00 436. Engineering tunable small molecule-responsive liposomes through liposomal membrane modulation using a synthetic lipid switch. **B.E. Smith**, C.G. Russell, M.B. Mustafa, M. Best

8:00 437. Effect of kelulut honey on fluidizing model liver cell membranes and on the structure of insulin. **A.R. Earle**, A. Goach

8:00 438. Sn^{4+}-induced blue emission enhancement in ultrathin perovskite nanowires via post-synthetic cation exchange. **Y. Liu**, Z. Liu, R. Wu, O. Chen

8:00 439. Novel top-down synthesis of aluminum-based quantum dots for sensing applications. **A. Lloyd**, J. Pereira, M. Barry, S. Santra

8:00 440. Defect engineering and processing routes for plasmonic control in Cd_2SnO_4 colloidal nanocrystals. **M. Amane**, G.F. Strouse

8:00 441. Glutaraldehyde facilitated enzyme immobilization: Assessment of particle crosslinking. **R. Mendez-Garcia**, T. Le-Vasicek

8:00 442. Scanning for order: Can R-2-butanol behave on Ni(111)?. **J. Ashra**, K.B. Weinstock, A.C. Shepherd, J. Whitted, A. Baber

8:00 443. Synthesis of red-emissive carbon dots from benzothiazoline salts for bioimaging. **A. Joji**, K.L. Pyait, R.M. Leblanc

8:00 476. Understanding the kinetic aspects responsible for the formation of 3-aminophenol-formaldehyde resin beads with different morphologies. **J. He**, Y. Xia

8:00 477. Withdrawn

8:00 478. Synthesis of fisheye nanocage composed of intact Ag nanocubes with interior gaps. **T. Ogunrinola**, Y. Bao

8:00 479. Impact of pristine and transformed polystyrene nanoparticles on *B. subtilis* viability. **V. DeMaria**, C. Tovar, S.R. Weibel, M.A. Bertucci, A.C. Mensch

8:00 480. Cyclodextrin inclusion complex with organic molecules capped silver nanoparticles in metal ion detection. **S.B. Poudel**, D. Ghosh

8:00 481. ZnS-based quantum dots: synthetic adventures and heavy metal applications. **A. Uppal**, M. Abakah-Quianoo, C. Whitehead

8:00 482. Mechanochemical synthesis of 2D halide lead perovskite. **C. Thurman**, E. Stephens, P. Lyu

8:00 483. What is driving $Se^{2:}$ Anion exchange on $Cu_{2-x}S$ nanoparticles?. **M. Boleychuk**, Q. Boussard, E. Sandoval-Arteaga, M. Topiwala, E. Paul, N. Kuntipuram, K. Plass

8:00 484. Photocatalytic degradation of PFOA using Cu^{2+}-doped brookite TiO_2 nanoparticles. **H. McFadden**, O. Love

8:00 521. Exploring the impacts of AuNP surface charge on the secondary structure of BSA. **T. Saha**, S.E. Lohse, L.B. Thompson

8:00 522. Investigating the size dependency on optical properties for citric acid and ethylenediamine polymeric carbon dots. **G. Gagnon**, A.E. Gerdon

8:00 523. Development of model moisture-cure silicone elastomers for ideal fouling release investigations. **A. Rathnayake**, D. Boucher, D.C. Webster

8:00 524. Sustainable hybrid epoxy coatings with bio-based flame-retardant systems and functional fillers. **N. Hullenahalli Gangadhar**, M.A. Quadir, D.C. Webster

8:00 525. Siloxane-based surfactants: Synthesis, characterization, and application in PFAS-free firefighting foam stability. **R.H. Franjul**, J.P. Youngblood, C. Martinez

8:00 526. Controlled release of plant micronutrients via stimuli-responsive self-assembled polyphenolic nanodelivery system. **G. Phuyal**, J. Pereira, S. Santra

8:00 527. Machine perception of volatile organic compounds in the gas phase using fluorescent carbon nanotubes. **G. Liu**, Y. Wang, Y. Kim, M. Kim

Digital Meeting
Digital Session

Virtual Graduate Students Symposium in Asia-Pacific Region on Biomaterials & Biointerfaces

C. Zheng, *Organizer*
D. Ding, Y. Liu, *Organizers, Presiding*

8:00 . Point-of-care treatment of acute skin wound by portable *in situ* electrospinning nanofiber dressings with rapid hemostasis, anti-infection, and angiogenesis effects. **Y. Deng**, x. Liu

8:13 . Inhalable multilevel responsive microspheres for radiation-induced lung injury. **X. Zhang**, X. Wang, Y. Liu

8:26 . Ultrasound-responsive AIEgens-loaded microneedle patch for regional adiposity prevention via ROS-induced mitochondrial oxidative stress. **Z. wenfang**

8:39 . Disease landscape-guided design of neutrophil-specific reporters for early and accurate pneumonia detection *in vivo* and in urine. **Z. Li**, S. He, H. Tian

8:52 . Enzyme-driven self-evolving hydrogel for mechanosignaling pathway-mediated osteochondral regeneration. **Y. Zhuang**, J. Ding, X. Chen

9:05 . Programmable DNA condensates for cellular regulation. **s. li**, C. Yao

9:18 . Hierarchical structured vascular grafts with spatially micropatterned nanofibers for enhanced vascular patency and regeneration. **Y. He**, X. Li, G. Yang, Z. Zhang, S. Zhou

9:31 . DNA tetrahedral frameworks based multidimensional detection platforms for disease diagnosis. **X. Yu**, X. Zuo, F. Yin

9:44 . Near-infrared-II atomically precise nanoclusters: Construction and applications in biomedical imaging. **H. Ma**, P. Liu, H. Wang, X. Zhang

9:57 . Interfacial confined oxidation-assisted construction of black bioceramic coating on metal implants for therapy and regeneration by on-demand remodeling pathological microenvironment. **Y. Liu**, J. Tan, x. Liu

10:10 . Exercise-coupled piezoionic hydrogels convert joint motion into healing for cartilage. **y. xue**, Y. Liu, C. Chen

10:23 . Regulating material-cell interface for optimized tissue regeneration through extracellular matrix modification. **L. Zhao**, H. Xie

10:36 . All-in-one extracellular matrix-based powders with instant self-assembly and multiple bioactivity enables hemostasis-regeneration synergy. **C. Zou**, H. Xie

10:49 . Mechanism research of vascular endothelial cell damage and acute inflammatory reaction induced by cationic lipid DNA complex. **X. Cong**, T. Sun

11:02 . Spatially resolved whole transcriptomics and translatomics reveals tissue translational regulation mechanism. **J. Zhang**, C. Yang

11:15 . Revealing dynamic chemistry of solid–liquid interfaces with an integrative multimodal electron microscopy platform. **L. Liu**, L. Ling

11:28 . Withdrawn

11:41 . Optimizing oral drug delivery: The influence of ZnO nanomaterial morphology on drug loading and controlled release. **E.D. Senanayaka**, R.G. Rajapakshe, R. Jayasinghe, T. Herath, S. Gunathilaka

TUESDAY MORNING

Georgia World Congress Center
B314

Nanomaterials

Bio-Enabled Nanomaterials and Applying Nanotechnology to Biological Applications

S. Hunyadi Murph, S. Lim, R. Nagarajan, C. M. Sims, D. Watkins, *Organizers*
J. A. Hollingsworth, *Organizer, Presiding*

8:00 . N-doped carbon dot nanozyme with peroxidase-mimic activity for glucose detection. **M. HEMADI**, D. Sall, A. Diaw, J. Lomas

8:20 . Withdrawn

8:40 . Nanotechnology-driven colorectal cancer treatment: Co-encapsulation of irinotecan and cyclosporine A in SNEDDS for superior outcomes. **R. Yadav**, N. Mehra

9:00 . Unlocking axonal transport: Nanoparticle-based tracer for glaucoma detection. **G.L. Sheehan**

9:20 . Withdrawn

9:40 . N-Heterocyclic carbenes designed for improved water solubility of functionalized gold nanoparticles. **L.B. Lang**, S. Chowdhury, A. Nezamzadeh, I.M. Jensen, R.K. Vitro, C.M. Crudden, J.P. Camden, D.M. Jenkins

10:00 . CO_2 induced, programmable assembly of peptide conjugated gold nanoparticles. **T. Farrokhi**, S. Ceballos, M.B. Ross

10:20 . DNA and mRNA origami directed self-assembly of virus-like protein nanoparticles. **M.A. Kostiainen**

Georgia World Congress Center
B218

Surface Chemistry

Surface Structures and Architectures

A. V. Teplyakov, L. Tribe, *Organizers, Presiding*

8:00 . Enhancing anti-adhesion performance of chrome oxide (CrO_x) using self-assembled monolayer (SAM) coatings: A sum frequency generation (SFG) vibrational spectroscopic study. **J. Mawela**, D. Schmidt, L. Lillie, H. Lechuga, N. Chandrasekaran, D. Poirier, A. Gharachorlou, E. Ma, Z. Chen

8:20 . Plasma treatments of printing inks to improve setoff. **H.B. Musgrove**, I. Ivanov, H. Szczepanowska, J. Qu

8:40 . Nano libris: Long-term human readable data storage. **A. Carreon**, M.R. Linford, B.M. Lunt, J. Santos, F. Rivera

9:00 . Controlled growth of metastable surface structures. **S. Hollweger**, A. Werkovits, O.T. Hofmann

9:20 Break.

9:40 . Light-directed reaction–diffusion for programmable surface architectures. **T. Li**, X. Jiang, K. Song

10:00 . Properties of liquid crystal hydrogel composites and coatings. **A.D. Adedeji**, S. Morozova

10:20 . Flow-based direct growth of cof films on qcm-d sensors: *In situ* Analysis of functionalization effects on material and adsorption kinetics. **W. Yu**, J. Shyue

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 9

Basic Research in Colloids, Surfactants and Interfaces

S. Hunyadi Murph, S. Kamdar, U. Natarajan, Z. Niroobakhsh, *Organizers*
A. Mallia, *Organizer, Presiding*
J. Louf, *Presiding*

8:00 . Scaling of the 3-dimensional isotropic by physico-chemical nature and anisotropic by shape building blocks. **M.A. Lisunova**

8:20 . Morphodynamic freezing of polymer solution droplets across thermal and rheological regimes. N. Ulrich, P.P. Aravindhan, B. Beckingham, **J. Louf**

8:40 . Counterion effects on tetradecyltrimethylammonium (TTA+) micellar aggregates. **S.J. Bachofer**

9:00 . Employing salinity effects and electrokinetic interactions to pattern the internal morphodynamics of biocolloidal droplets. **K. Nath**, S. Dasgupta

9:20 . Overcoming kinetic traps in self-assembly of patchy particles: Pathway classification and thermodynamic speed limits under external drive. **s. nag**, Y. An

9:40 Intermission.

9:50 . Modeling of superionic nanoparticle lattices: From binary to ion-stabilized unary crystals. **P. Kral**

10:10 . Withdrawn

10:30 . From ethanol to longer-chain alcohols: Molecular simulation of surfactant-cosolvent interactions in supercritical CO_2. X. Liu, **Z. Jin**

10:50 . Pyridine (Di)carboxylic acids: A platform for advanced surfactant architectures. **A.F. Eftaiha**, A.K. Qaroush, F.M. Al-Qaisi, K.I. Assaf

11:10 . Engineering ‘liquid-like’ solid coatings with nitric oxide-release to combat biofouling of medical devices. **A. Shome**, R. Pandey, I. Martinez, N. Crutchfield, E.J. Brisbois, H. Handa

11:30 . Inkjet printing of silver colloidal solutions for anti-counterfeiting labels. **M. Tran**, C. Jiang

Georgia World Congress Center
B303

Biomaterials and Biointerfaces

E. Andreescu, S. Aryal, C. P. Collier, S. Sinha Ray, V. Sundaram, *Organizers, Presiding*

8:00 Introduction.

8:05 . Ultra high concentration antibody formulations enabled via thermostable ionic liquids. **M. Erdi**, A. Ramesh, S. Zhang, V.C. Suja, S. Mitragotri, B. Singh

8:25 . Amphiphilic dendrons as holdase mimics for the prevention of insulin aggregation. **E. Piedmont**, H. Distaffen, B.L. Nilsson, B.E. Partridge

8:45 . pH and CO_2 modulation of nanoparticle-peptide interactions. **S. Ceballos**, T. Farrokhi, M.B. Ross

9:05 . Insights into intracellular protein delivery through biophysical investigations of the interactions between biointerfaces and CG-modified ε-PLLs. **C.R. Romagosa**, J. Moon

9:25 . Pluronic bilayer-stabilized emulsions with tunable material properties as a living material with size-selective transport. **S. West**, A. Fica, A. Antony, T. Savargaonkar, M.G. Goren, K. Potter, M. Benyamin, S. Zilko, E. Fisher, D. Kheyroolla, A. Kretzschmar, R. Varma, D. Mavridou, M. Kumar, A. Rosales

9:45 Intermission.

9:55 . Phase separation–mediated microstructural engineering of biomaterials. **L. Li**

10:15 . Leveraging cellulose affinity for agrochemical targeted delivery on plant leaves. **J. Pereira**, E. Davidson, M. Deinys, G. Gan Giannelli, S. Santra

10:35 . Tuning ligand presentations for improved target-specific engagement of nanoconstructs. **K. Lee**

10:55 . Mechano-ID: Proximity labeling of mechanically active receptors reveals the mechanome and tags mechanically active cells. **M. Abdul Rahman**, R. Ma, C.M. Beusch, B.R. Deal, D.E. Gordon, K. Salaita

Georgia World Congress Center
B304

Colloidal Semiconductor Nanocrystals (Including Perovskite Nanocrystals)

G. Jia, *Organizer, Presiding*
B. M. Cossairt, L. Li, J. Zhao, *Presiding*

8:00 . Synthesis of colloidal nanocrystals in molten inorganic salts. **D. Talapin**

8:20 . Fluorescence fluctuations in single lead halide perovskite quantum dots and the impact of ligands. **J. Zhao**, H. Nyiera

8:40 . *In situ* structure and morphology investigations of slot-die coated perovskite nanocrystal films. **T. Baier**, A. Buyan-Arivjikh, L. Li, X. Ci, M. Döblinger, M. Schwartzkopf, T. Bein, S. Koyiloth Vayalil, P. Mueller-Buschbaum

8:55 . Withdrawn

9:15 . Engineering interface defects and strain in inP quantum dots. **L. Li**, C. Yuan

9:35 . Insights into ligand-controlled phonon dynamics in $CsPbBr_3$ nNanocrystals via machine learning potentials. **S. Cha**, C. Wang, V. Fung, G. Hu

9:50 . The two-step model for colloidal semiconductor quantum dots and magic-size clusters. **K. Yu**

10:10 . On-substrate synthesis of perovskite nanocrystals guided by *in-situ* optical spectroscopy. **M. Wei**

10:30 . Cation- and anion-vacancy control for mechanistic understanding and functional response in inorganic nanostructures. **X. Li**

10:50 . Chiral ligand exchange in indium-doped cadmium oxide nanocrystals for plasmonic and spin control. **S. Bell**, G.F. Strouse

11:05 . Semiconductor artificial atoms: Programming with atomic precision. **C. Zeng**

11:25 . Ultrabright shortwave infrared HgTe nanocrystals. **J.R. Caram**

11:45 . Modulating surface potential with phosphonic acid patterns for high-resolution micro-qleds. **Y. Xu**, G. Dixon, Y. Zhang, H. Contreras, B.M. Cossairt, S. Marder, D.S. Ginger, E. Reichmanis

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 10

Recent Development of Polymer Surface/Interface and Polymer Thin Film Design, Preparation, Characterization, and Modeling

Polymer Adhesion and Sensing

Z. Chen, T. Wei, S. Zhao, *Organizers, Presiding*

8:00 Introduction.

8:10 . Molecular-Level insights into covalent adhesion mechanisms at buried silicone-polymer interfaces. T. Lin, Y. Wu, J. Kelleher-Ferguson, Z. Chen, **E. Santos**, D. Ahn, X. Chen, C.J. Tucker, F. Gubbels, N. Shephard, R. Marson, T. Kuo, C. Mohler, P. Sarker, T. Wei

8:40 . Ionic liquid and conductive polymer Interfaces for sensors. **X. Zeng**

9:10 . Bilayer hydrogels: From mechanistic design, interfacial structure to programmable actuation. **J. Zheng**

9:40 . Understanding miscibility and adhesion at polymer interfaces. **E. Ma**

10:10 . Modular carbon quantum dot skins on nanotube frameworks for versatile electrochemical sensing. **A. Liu**

10:40 . Soft interferometric nanostrain sensor reveals solid liquid interfacial tension oscillation amplified by competitive adsorption. S. Cheng, M. Jalali-Mousavi, **J. Sheng**

11:10 . Multiscale modeling of nanoconfinement and interfacial adhesion in polymeric materials. **W. Xia**

11:40 . Impact of polarons on the interphase structure of soft polymer materials. **M.R. Brown**, J.H. Bombile, J. Thurston, H. Kantrow, J.Y. Kpare, J.E. Bredas, M. Toney, N. Stingelin, N.R. Armstrong, E. Ratcliff, C. Risko

TUESDAY AFTERNOON

Georgia World Congress Center
B303

ACS Award Lectures 2026

R. Gupta, *Organizer, Presiding*

2:00 Introductions.

2:10 . Award Address (ACS Award in Surface Chemistry sponsored by The Procter & Gamble Company). Chiral metal surfaces: From discovery to enantiospecific chemistry. **A.J. Gellman**

3:05 . Award Address (ACS Award in Colloid Chemistry sponsored by the Colgate-Palmolive Company). Colloidal endeavors: From esoteric to practical and back. **D. Talapin**

4:00 . Award Address (Dong Qin ACS Award in Nanochemistry supported by an endowed fund established by Younan Xia). From anisotropic to asymmetric metal nanocrystal growth. **L. Liz Marzan**

TUESDAY EVENING

Digital Meeting
Digital Session

Virtual Graduate Students Symposium in Asia-Pacific Region on Biomaterials & Biointerfaces

C. Zheng, *Organizer*
D. Ding, Y. Liu, *Organizers, Presiding*

8:00 . Ultrasound-driven cGAMP biosynthesis enables *in situ* STING activation for enhanced cancer immunotherapy. **M. Wu**, X. Zhen

8:14 . Smart DNA hydrogels for enhanced cancer immunotherapy. **R. Zhang**

8:28 . Polyglutamine as vaccine nanoadjuvant potentiates type 1 conventional dendritic cells-mediated anti-tumor immunity. **x. wang**, J. Ding

8:42 . Increased perfluorooctanoic acid accumulation facilitates the migration and invasion of lung cancer cells via remodeling cell mechanics. **K. Xu**, J. Mei, C. Chen, Y. Liu

8:56 . Self-reinforcing metabolic nanojammer for activating cascade-augmented cuproptosis-driven immunotherapy. **Y. Zhang**, **Y. Dong**, **J. Hou**, **S. Zhou**

9:10 . Design of TLR7/8 nanoagonist with spatioselective activation for antitumor immunotherapy. **X. Ren**, N. Shen, Z. Tang

9:24 . Ultrasound-triggered “four-step” Cascade nanodelivery system featuring labeling, targeting, releasing, and activating. **H. Xu**

9:38 . Polymer optical materials for detection and regulation of tumor immune microenvironment. **H. Li**, X. Zhen

9:52 . Mechanical regulation of ductular reaction by the fibrotic niche. **M. Zhu**, C. Song, J. Chen, F. Wei, Y. Du, M. Long

10:06 . Neutrophil reverse migration in a dual channel vascular microphysiological system. **J. Han**, Y. Du, R. Xu, J. Zhu, N. Li, S. Lv, Y. Zhang, M. Long

10:20 . Metabolic labeling-assisted microfluidic capture and quantification of nascent gut bacterial extracellular vesicles. **L. shanshan**, M. Zhang, Y. Wang, X. Wang, H. Chu, P. Zhang, J. Gao, X. Deng, C. Yang

10:34 . Atom engineering of clusters: From precise structure control to enhanced biocatalysis. **S. Sun**, X. Zhang

10:48 . Novel proteolysis-chimera for spatiotemporally selective degradation of mitochondrial-associated proteins and enhanced cancer immunotherapy. **J. Zhao**

11:02 . Influence of PEG shell topology on the in vivo biological behavior of nanoparticles. **M. Zhao**, Y. Zhang, T. Sun

11:16 . Superparamagnetic iron oxide nanoparticle sensors for calcium, dopamine, and glutamate neurochemicals under magnetic resonance detection. **H. Mettee**, A. Asparin, Z. Ali, **X. Li**, Y. Li, **S. He**, Y. Zhang, D. Taha, J. Hall, Y. Ha, A. Kim, K. Sarwar, H. Kiran, Z. Khan, M.J. Hawker, M. Uchida, S. Wu, H. Wei

11:30 . Electrophoretic deposition of functionalized fluorescent silica particles on stainless steel surfaces for biosensor applications. **A.S. De Silva**, A. Tillekaratne, D. Jayasundara, S.M. Vithanarachchi, C. Hettiarachchi

11:44 . Low-molecular-weight organic acids and iron regulate extracellular enzyme secretion in microbial systems to accelerate phenanthrene degradation. **J. Yu**, J. Guo

WEDNESDAY MORNING

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 9

Biomaterials and Biointerfaces

E. Andreescu, S. Aryal, C. P. Collier, S. Sinha Ray, V. Sundaram, *Organizers, Presiding*

8:00 Introduction.

8:05 . 3D-printed enzyme-mimetic materials for portable on-site sensing and smart packaging. **E. Andreescu**, A. Khan, M. Awan, N. Gondhiya, J. Abdelnabi, O. Popoola

8:25 . Brain-inspired lipoprotein particles to restore lipid efflux functions in the Alzheimer's disease brain. **R.L. Pinals**, C. F. Lozano Cruz, A. Tuyeras, A. Burman, P. Balachundhar, L. Tsai

8:45 . Platinum-cobalt nanoparticles as magnetically active peroxidase-mimicking nanozymes for cancer biomarker detection. **S. Shao**, X. Sun, X. Xia

9:05 . Particle deformability controls interactions and self-assembly of membrane-anchored nanoparticles. N. Nambiar, **S.M. Abel**

9:35 . Engineering nanomaterials for stem cell labeling and optical coherence tomography (OCT) contrast agent: Applications in ophthalmology and biomedical imaging. **U. Datta**, M.R. Mackiewicz

9:45 Intermission.

9:55 . Sequence-encoded bio-interactions: Decoding DNA surface chemistry effects on swcnt intracellular processing, nanotoxicity, and intracellular stress pathways. **A. Nadeem**, T. Xu, J.S. Gray, M. Kim

10:15 . Automated high-content, high-throughput spatial drug screening in 3D tumor spheroid inverted colloidal crystal (iCC) arrays. **H. Jeon**, G. Kim, J. Carpenter, Y. Colon, Y. Wang

10:35 . Stainless steel as a robust substrate for DNA nanostructure deposition and polymer nanoimprinting. **H. Liu**

Georgia World Congress Center
B305

Surface Chemistry

Nano and Microparticles, Well-Defined Surfaces

A. V. Teplyakov, L. Tribe, *Organizers, Presiding*

8:00 . Surface molecular interactions and stabilization of coated inorganic nanoparticles. **K. Lilova**, T. Subramani, I. Montini, A. Harrison, R.B. Wexler, E.A. Hernandez-Pagan

8:20 . Regulating monodispersity and sphericity of silica aerogel microspheres. **D. Yang**, Q. Pan, Q. Liu, T. Wang

8:40 . Stability of N-heterocyclic carbene ligands on gold nanoparticles. K.M. Hatzis, **D.T. Kuttikanda Vidanelage**, A. Gautam, D. Nanan, M. Aloisio, A.V. Mironenko, C.M. Crudden, C.J. Murphy

9:00 . Accurate dissociation behavior of surface groups on nanorods as determined by conductometry. **E. Kontturi**, M. Kröger

9:20 Break.

9:40 . Polymer ligands for nobel metal nanoparticles: From binding to action. **J. He**

10:00 . Utilization of Water for Propylene epoxidation on Ag/Cu(111). **J. Whitted**, K. Weinstock, O. Paulson, M. Corbett, E.M. Euler, J. Ashra, A. Baber

10:20 . Influence of pre-adsorbed hydrogen and CO on Pt(111) on the adsorption enthalpies of solvent molecules. **V. Chesnyak**, A. Saha, M. Sharp, Z. Novotny, N. Janulaitis, C.T. Campbell, Z. Dohnalek, L. Arnadottir

Georgia World Congress Center
B314

Nanomaterials

Advanced Nanomaterials Synthesis and Assembly

S. Hunyadi Murph, S. Lim, R. Nagarajan, C. M. Sims, D. Watkins, *Organizers*
J. A. Hollingsworth, *Organizer, Presiding*
K. Kalkan, *Presiding*

8:00 . Preparing superconducting YBCO colloids via top-down and bottom-up processing routes for applications in electronics and energy transfer. **M.M. Maye**, H. Reinheimer, S.K. Delali

8:20 . Exploration into interstitial defects and crosslinks capable of strengthening boron nitride nanotube bundles. **N. Tjahjono**, E. Penev, V.I. Yamakov, C. Park, B.I. Yakobson

8:40 . Unveiling the possible configurations of hetero metallic clusters anchored on h-BN sheet. **T. Dinadayalane**, M. P, T. Riggins, D. Daggag, S. Ramasamy

9:00 . From irregular defects to perfect triangles: Tuning nanopore geometry in 2D MoS_2 via size and chemical environment control. **S. Bhowmik**, A. Govind Rajan

9:20 . AFM tip-based cleaning for transferable photoluminescence enhancement in Au-exfoliated MoS_2 monolayers. **J. Lee**, J. Jo, G. Jeon, J. Jang

9:40 . Colloidal semiconductor quantum cubes. **D. Nazar**, M. Zamkov

10:00 . Kinetics of plasma treatments for biopolymer surface modification. **B. Yashkus**, J.M. Blechle

10:20 . Engineering metal–phenolic materials via supramolecular assembly. **Z. Lin**

10:40 . Interfacial chemistry control of in situ grown gold nanoparticles on functionalized mxene nanosheets. **V. Poliukhova**, V. Buranych, J. Brackenridge, J. Choi, A. Pogrebnjak, V.V. Tsukruk

Georgia World Congress Center
B304

Active and Responsive Matter

A. Liu, *Organizer, Presiding*

8:00 . Photoacoustic imaging of cell-targeting, bio-conjugated gold nanorods. **F. Al Hadad**, A. Martino, K. Hood, B. Fallon, R.C. Willson, N. Mathuria, R.R. Bouchard, C.S. Filgueira

8:20 . Nucleic acid-powered motors as biosensors to detect transient biomolecular interactions. **J. Hardin**, Y. Imtiaz, K. Salaita

8:40 . Dynamic skin-inspired materials: Bridging cephalopods, humans, and robots. **C. Xu**

9:20 . Plasmon-enhanced fluorescence nanoplatform for determining of antibiotic susceptibility against superbugs using doxycycline-decorated silver nanoparticle. **S. Rai**, O.P. Kolawole, A. Pramanik, K. Gates, S. Kundu, P.C. Ray

9:40 . Assessment of PLGA pore size on the loading and release. **J. Bailey**

10:00 . Engineering hydrophilic peptides via zwitterionic unnatural amino acids. **W. LIU**, Z. Jin, X. Wang

10:20 . "Turbo-charged" DNA motors with optimized sequence enable single-molecule nucleic acid sensing. **L. Zhang**, S. Piranej, A. Namazi, S. Narum, K. Salaita

10:40 . Fuel-free rolosense: Viral sensing using diffusional particle tracking. S. Piranej, **K. Jackson**, L. Zhang, J. Kæstel-Hansen, F. Sommerhage, D. DeRoo, N.S. Hatzakis, K. Salaita

11:00 . Hyperelastic miniaturized robots. **J. Li**

11:40 . Label-free electrochemical immunosensor for lysozyme detection using tunable gold nanostructured electrode. **S. Maparathne**, T. Lee

Georgia World Congress Center
C204

Colloidal Semiconductor Nanocrystals (Including Perovskite Nanocrystals)

Y. Bekenstein, M. I. Bodnarchuk, O. Chen, J. Tian, *Presiding*

8:00 . Maximizing chiroptical response in quantum dot-biomolecule hybrids. **B.M. Cossairt**, C. Lowe

8:20 . Colloidal synthesis as a driver of paradigm shifts in perovskite nanocrystal miscibility. **Y. Bekenstein**

8:40 . Bandgap engineering of Halide Perovskite Nanocrystals for maximizing Hole transfer: Accessing the marcus Inverted region. **A. Chemmangat**, H. Chen, P.V. Kamat

8:55 . Synthesis and applications of anisotropic halide perovskite nanocrystals. **O. Chen**

9:15 . Withdrawn

9:35 . Complementary *P* And *N* Type nanocrystal inks based on $agbis_2$ For solution processable optoelectronics. **A. Shaker**, N. Jayasekara, A.B. Greytak

9:50 . Withdrawn

10:10 . Colloidal quantum Cubes (qubes): An emerging nanophotonic structure for optoelectronic applications. **M. Zamkov**

10:30 . Synthesis of low-dimensional Perovskite nanostructures for photovoltaics. **S. Park**

10:50 . Ligand-dependent optical properties of colloidal ternary spinel oxide nanocrystals containing transition metals. **R. Rajan**, J.C. Scalia, L.R. De Jesus, K.E. Knowles

11:05 . Decoupling nucleation and growth for eswir-responsive colloidal insb quantum dots. **T. Zhao**

11:25 . Withdrawn

11:45 . Exploring the driving force for the ligand exchange on lead halide perovskite nanocrystal surfaces. **B. Adhikari**, M. ISLAM, A.B. Greytak

WEDNESDAY AFTERNOON

Georgia World Congress Center
B305

Surface Chemistry

Biointerfaces and Dyes

A. V. Teplyakov, L. Tribe, *Organizers, Presiding*

2:00 . Host-gated enzymatic release (H-GER) enables colorimetric transduction for enzyme measurement. **Z. Zhang**, W. Liu, X. Wang, Z. Jin

2:20 . Comparative study of binding kinetics and diffusion dynamics of fluorescent probes on surface immobilized lambda DNA. **S. Pandey**, J. Chen

2:40 . Detection of extracellular vesicles using fluorescent carbon nanotubes. **I. Hwang**, J. Miller, C. hisey, M. Kim

3:00 . Novel structure formation of hybrid chiral biomolecular crystals and nanosurface systems. **P. Rehak**, P. Kral

3:20 . Interfacial photochemistry of triarylmethane dyes. **N.V. Tkachenko**

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 7

Biomaterials and Biointerfaces

E. Andreescu, S. Aryal, C. P. Collier, S. Sinha Ray, V. Sundaram, *Organizers, Presiding*

2:00 Introduction.

2:05 . Sonochemical coating of ceragenin-loaded nanogels on silicone catheters for prevention of catheter-associated urinary tract infections. **A. Puertas**, K. Ivanova, T. Tzanov

2:25 . 'Sandwich'-like inclusion complex of a lipophilic nitric oxide donor for controlled nitric oxide delivery. **X. Wang**, P. Sheet, K. Wang, O. Lautner-Csorba, H. Naldrett, A. Brunaugh, S. Schwendeman, G. Lautner

2:45 . Coacervates for Sustained release and triggered drug delivery. **Z. Jin**

3:05 . Using chemical surface modifications to inhibit methicillin-resistant *Staphylococcus aureus* (MRSA) biofilm formation. **E. Mills**, N. Stockman, M.S. Blackledge, P. Lundin

3:35 . Photocurable monoolein-based injectable system for in situ forming gel applications. **H. Ghazali**, Z. Niroobakhsh

3:45 Intermission.

3:55 . Living active interfaces: Microbial restructuring of the oil-water interface and plastic surfaces. **A. Pete**

4:15 . Graphene-based ointment for efficient prevention and disruption of biofilms. **A.R. Deokar**, B. Chavda

4:35 . Bio-based nano-enabled layer-by-layer coating with dual antimicrobial and antifouling performance for the prevention of urinary infections. **S. Stolfo**, A. Puertas, K. Ivanova, T. Tzanov

Georgia World Congress Center
B302

Basic Research in Colloids, Surfactants and Interfaces

S. Hunyadi Murph, S. Kamdar, U. Natarajan, Z. Niroobakhsh, *Organizers*
A. Mallia, *Organizer, Presiding*

2:00 . Stabilization of complex coacervate emulsions by comb polyelectrolytes: Effects of side-chain density and length. **C. Fick**, V. Maheshwari, S. Srivastava

2:20 . Investigating the effects of macromolecular crowding on the mechanism of protein–polymer complex coacervation. **S. Biswas**, A.Y. Xu, S. Pingali, X. Zuo, K.T. Tran

2:40 . Structure-property relationships for DNA-cationic lipid-based materials. **L.H. Kugelmass**, B.D. James

3:00 . Surface engineering of magnetite nanomaterials: Investigation into structural and magnetic studies. **A.K. Das**

3:20 . Fully biocompatible drug carriers for targeted cancer therapy. **M. Klapper**

3:40 Intermission.

3:50 . Liquid crystal emulsions stabilized by nanoparticles for sensing lipid membranes. M.K. Oñate-Socarras, O.H. Piñeres-Quiñones, D.M. Lynn, **C. Acevedo-Velez**

4:10 . Chemistry of touch: Correlating texture and flow with sensory experience in skin creams. A. Gerken, E. Libby, P. Vigilante, R. Safee, M. Szoboszlai, P. Maineri, **G. Baki**

4:30 . Structure formation in latex colloid-cellulose nanofibril hybrid films. **S.V. Roth**, L. Kreuzer, D. Söderberg, P. Mueller-Buschbaum, E.E. Malmstrom

4:50 . Bio-inspired materials for self-sealing cement composites. **E. Contreras**

Georgia World Congress Center
B314

Nanomaterials

Nanoscale Size Effects on Chemistry and Photophysics

S. Hunyadi Murph, S. Lim, R. Nagarajan, C. M. Sims, D. Watkins, *Organizers*
J. A. Hollingsworth, *Organizer, Presiding*
K. Kalkan, *Presiding*

2:00 . Combined computational and experimental study of ligand orientation and dynamics during amidation in plasmonic gold nanogaps. **J. Spencer**, H. Pascual Herrero, T.D. Gaffney, A. Yu, R. Ragan, E.M. Lee

2:20 . Polysalt ligand complexes for surface passivation of blue-emitting perovskite nanoplatelets. **U. Vorajee**, S.E. Donmez, S. Wang, H.M. Mattoussi

2:40 . Withdrawn

3:00 . Cu-based nitride nanoparticles for electrocatalysis. **J. Li**, O. Olarinde, A. Akter, K. Crawford, K. Hilson, C. Martinez

3:20 . Carbon nanotube-enhanced metal mesh hybrid to deliver nanoscale properties for macroscale applications. **C. Kumara**, S. Jang, M.J. Lance, H. Wang, J. Qu

3:40 . Photo-dynamics of azobenzene under molecular confinement. **G. Lee**, J. Lee, J. Park, J. Park, D. Lee

4:00 . Cupric oxide and magnetite Mie-resonator nanoparticle dispersions in an ionic liquid: Application to high-performance solar-thermal absorbers. **K. Kalkan**, F. Mahatab, S. Sadeque, I. Humaira

4:20 . Rapid One-Pot Synthesis of 2D AgTePh: Colloidal Pathways governing SWIR (Aggregates) vs visible (Platelets) emission. **T.L. Atallah**, L.T. Nguyen, R. Zupnick

4:40 . Thermochemistry of complexation of Mn-OLAM precursor in the formation of MnS nano phases and effects surface energetics. **T. Subramani**, K. Lilova, R.B. Wexler, E.A. Hernandez-Pagan

Georgia World Congress Center
B304

Active and Responsive Matter

A. Liu, *Organizer, Presiding*

2:00 . Remediation of thin fluid film environments with enzyme micromotors. **M. Collins**, E. Languirand, L. Babb, C. Jameson, E. Gibson Parrilla, A. Sen

2:20 . Swimming colloids in nematic liquid crystals. **K.J. Stebe**

3:00 . Uniform reversible buckling in highly hydrated spherical ultrathin hydrogel shells. **V.A. Kozlovskaya**, S. Nealy, M. Hossain, E.P. Kharlampieva

3:20 . Intelligent materials with structural colors and for complex 3D printed objects. **M. Gallei**, G. Rizzello, K. de Payrebrune, L. Siegwardt

3:40 . Photodimerization-induced diffusion for controlled micropattern growth. **T. Li**, X. Jiang, K. Song

4:00 . Revealing superdiffusive active motion of nanoscale particles with correlative light and electron microscopy. **I. Panicker**, K. Requejo Roque, R. Ruiz, C. Bustamante, V. Jamali

4:20 . Characterizing the permeability of abiotic protocells with phosphate and sulfate headgroups using fluorescence decay. **A. Glagovich**, S.E. Maurer

4:40 . Exploring the lack of size control in zinc sulfide nanocrystals. **K.J. RiggsTurpin**, A. Walker, V. Edwards, M.P. Hendricks

5:00 . Controlling anisotropic colloidal assembly in external fields using digital twins and deep reinforcement learning. A. Pellicciotti, J. Bond, **M.A. Bevan**

5:40 . Automated synthesis of silver nanocrystals with surfactants. **C. Hansen**, N.L. Myers, C. Hermanson, K. Tiddle, G. Didway, N. Kaplan, M.P. Hendricks

Georgia World Congress Center
B207

Colloidal Semiconductor Nanocrystals (Including Perovskite Nanocrystals)

G. Jia, *Organizer*
I. Fedin, X. Li, H. M. Mattoussi, A. M. Munro, *Presiding*

2:00 . Imparting structural homogeneity and improving the fluorescence of hybrid perovskite nanocrystals via ligand design. S.E. Donmez, **H.M. Mattoussi**

2:20 . Synthesis and spectroscopy of short-wave infrared (SWIR) Cd_3P_2 and $(Cd_xZn_{1-x})_3P_2$ Quantum dots. **I. Fedin**, L. Smith, N. Tiwari, A. Halim, B. Diroll

2:40 . Towards regioselectivity in ligand exchange on semiconducting nanocrystals. **M. ISLAM**, A.B. Greytak

2:55 . Synthetic approach to tune the length and width of znse nanorods. **A.M. Munro**

3:15 . Low-temperature colloidal llzo precursors for densification-first solid electrolyte processing. **P. Banerjee**

3:35 . Colloidal synthesis of selenium-alloyed $bams_3$ (M = Ti, Zr). **V.A. Kshirsagar**, P. Gramelspacher, M. Perera, S. Creutz

3:50 . TBA. **J.A. Hollingsworth**

4:10 . Unit-level thickness control of ultrathin perovskite nanowires. **Z. Liu**, Y. Liu, O. Chen

4:30 . Investigating the role plumbates play in the growth, assembly, and chiroptical properties perovskite nanocrystals. **M.M. Maye**, A. Stapf, I.E. Chukwudubem, T. Chiang, D.J. Kerwood, M. Cotlet

4:50 . Investigating photophysical properties of perovskite nanocrystals and their interactions with etls to uncover their roles in solar cells. **A. Das**, T. Rajh

5:10 . Mechanisms of precursor conversion in the synthesis of $AgBiS_2$nanocrystals. **S. Creutz**, A. Regan, V. Kshirsagar, P. Gramelspacher, C.E. Webster, T. Boggess

5:30 . Surface roughness and shapes affect ligand density of colloidal semiconductor nanocrystals. **G. Jia**

5:45 . Doping engineered magneto plasmonic modulation in CTO nanocrystals. **A. Pazoki**, G.F. Strouse

THURSDAY MORNING

Georgia World Congress Center
B304

Additives for PFAS Remediation

D. Lee, D. Miller, R. Riggleman, K. J. Stebe, *Organizers, Presiding*

8:00 Introductions.

8:10 . Nanobubble-enhanced foam fractionation for energy-efficient removal of short-chain PFAS from drinking water. **S. McBride**, P. Koochak, D. Ho

8:40 . Exploring photocatalytic degradation pathways of PFAS (PFNA) over reduced graphene oxide/tungsten oxide heterostructures. **S. Kundu**, K. Gates, S. Rai, A. Pramanik, O.P. Kolawole, P.C. Ray

9:10 . Effect of mono- and multivalent metal cations on interfacial behavior of PFAS at air/water interface. **W. Jung**, S. Lee, R. Riggleman, D. Lee, K.J. Stebe

9:40 Break.

9:50 . Chelating agent:mediated pathways for PFOA degradation and defluorination in Fe_3O_4-Catalyzed H_2O_2 reactions. **W. Chen**, Y. Biao, B. Cheng

10:20 . Enhancing PFAS capture through hydrophobic ion pairing–induced physicochemical modification. **A. Venkatesan**

Georgia World Congress Center
B302

Basic Research in Colloids, Surfactants and Interfaces

S. Hunyadi Murph, S. Kamdar, U. Natarajan, *Organizers*
A. Mallia, Z. Niroobakhsh, *Organizers, Presiding*

8:00 . Under-liquid dual superlyophobic surfaces without re-entrant texture. **M. Alipanahrostami**, S. Faraji Gargari, T. McCoy, W. Wang

8:20 . Facile fabrication of sustainable superhydrophobic fabrics using natural wax. **S. Faraji Gargari**, M. Alipanahrostami, T. McCoy, W. Wang

8:40 . Surfactant-induced sliding droplets on smooth hydrophilic surfaces. **T. McCoy**, M. Alipanahrostami, W. Wang

9:00 . Ultracentrifugation-induced fusion of lipid nanoparticles enhances transfection potency. **T. Wu**, O. Banda, T. Phoka, T. Anderson, K. Gupta, M.G. Alameh

9:20 . Essential role of concave structures for stable superhydrophobic surface. **J. Lee**, J. Park, K. Jeong, S. Lee, J. Lee, S. Wooh, D. Lee

9:40 Intermission.

9:50 . Pure water-templated porous PDMS sponges for efficient oil absorption. **S. Lee**, G. Lee, J. Ryu, D. Lee

10:10 . Uncovering chemical principles governing nanophase formation in ternary solvents. **L.D. Zarzar**

10:30 . Withdrawn

Joint Programming

SUNDAY MORNING

Marriott Marquis
International 6

Microplastics

Microbial and Enzymatic Plastic Degradation

M. Cush, R. M. Espinosa-Marzal, K. Goodall, J. Jin, S. Kanel, G. P. Miller, A. Nason, N. Norman, R. Saha, A. M. Savage, Organizers
M. A. Blenner, Organizer, Presiding

8:00 . Mechanistic insights into LDPE degradation by gut-derived dye-decolorizing peroxidases (DyPs) in Tenebrio molitor. R. Klauer, Z.O. Schyns, N. Miller, A. Hansen, L. Korley, M.A. Blenner, **K. Solomon**

8:30 . Identification of diverse microbial species with capacity to degrade low density polyethylene. A. Huang, A. Vispute, M. Hoey, A. Adams, C. Yeo, W. Eward, M. Dunphy-Daly, **J. Somarelli**

9:00 . Stable-isotope probing of microbial species driving cellulose diacetate biodegradation in the coastal ocean. **Y. Sun**, O. Schmidt, J. Huber, C. Reddy, C.P. Ward

9:20 . Engineering protein-based materials to capture environmental nanoplastics. **N. Ling**, A. Obermeyer

9:40 Intermission.

10:00 . Growth-coupled screening for PET depolymerization in Vibrio natriegens. **N. Crook**, T. Li

10:30 . Withdrawn

11:00 . Enzymatic depolymerization of plastics. **H.S. Alper**

Georgia World Congress Center
B5 - EXHIBIT HALL ChemPod 5

Georgia World Congress Center
B218

Physics and Chemistry of Foams

Cosponsored by COLL and POLY
K. Patankar, A. Shete, Organizers, Presiding

8:00 . Foaming of polymers with physical blowing agents: Perspectives on methodology, pressure-induced thermal transitions, and foaming outcomes. **E. Kiran**, D. Rhee

8:30 . Polyurethane chemistry. **K. Aou**

9:00 . Thermal transport in polyurethane foams. J. Zhou, S. Yeon, W. Zhou, T. Fielitz, D. Cahill, **P.V. Braun**

9:20 . Patterning stochastic polyurethane foams via direct ink writing for thermal and protective applications. **D. Patil**, K. Song

9:40 Intermission.

10:10 . Enhancing circularity of extruded polystyrene foam using supercritical CO_2 and renewable carbon. A. Gaihani, W. Xu, L. Tribe, **P. Charpentier**

10:30 . Withdrawn

10:50 . Withdrawn

SUNDAY AFTERNOON

Marriott Marquis
International 6

Microplastics

Environmental Transport and Removal

M. A. Blenner, M. Cush, K. Goodall, J. Jin, S. Kanel, G. P. Miller, A. Nason, N. Norman, R. Saha, A. M. Savage, Organizers
R. M. Espinosa-Marzal, Organizer, Presiding

2:00 Introductory Remarks.

2:05 . From detection to mitigation: Analytical approaches to tire microplastics in environmental matrices. **J.V. Cizdziel**, B. Olubusoye, R. Li, Z. Gao

2:45 . Aragonite crystallization pathways in the presence of microplastics. **A. Nason**, J. Yus, J. Li, R.M. Espinosa-Marzal

3:25 Intermission.

3:35 . Harvesting ocean plastics to pave hawaiian roads: Evaluation of microplastic and plastic additive release from asphalt incorporating recycled plastic from various waste streams. **J. Axworthy**, J. Lynch, C. Wardinski, M. Calderon, C. Megill, K. Shaw, J. Forakis, K. Teague, R. Corniuk, E. Walker, M. Seeley, S. Williams, M. Brinkmann, A. Cachon

4:00 . Surface interactions of goethite and kaolin with pet microplastics: insights from FT-IR, XRF, and XPS characterization. **T. Tongesayi**

4:25 Intermission.

4:35 . Enhanced methods for evaluating fragmentation of plastics. **J. Weinhold**, E. Caro Rubio

5:00 . Green synthesis of silver nanoparticles using selenicereus undatus for microplastic remediation and trace metal content evaluation of selenicereus undatus using microwave plasma atomic absorption spectrometry (mpaes). **S. Adurty**, M. Nemallapalli

5:25 . Scout: Real-time microplastic detection via impedance spectroscopy. **B.C. Colson**, a. michel

Georgia World Congress Center
B218

Physics and Chemistry of Foams

K. Patankar, A. Shete, Organizers, Presiding

2:00 . Next-generation high-performance polyiso foam insulation development at oak ridge national laboratory. **S. Shrestha**, S. Wanasinghe, Z. Demchuk, A. Tamraparni, T. Saito, C. Gainaru, D. Hun, T. Feng, J. Tiwari

2:30 . Frontal polymerization for removable, high performance foam encapsulants. **H. Fowler**, K. Van Meter, B. Jones, S.C. Leguizamon

2:50 . Harnessing frontal polymerization in the construction of polymeric foams. **D.M. Alzate Sanchez**

3:10 . Improving stability of pfas-free firefighting foams with polyurea microcapsules. **E. Malek**, J.P. Youngblood, C. Martinez

3:30 Intermission.

4:00 . Simultaneous emulsion templating and foaming of a renewable resource monomer and the formation of interpenetrating polymer networks for hierarchical porosities. S. Maoz, K. Avarjel, **M.S. Silverstein**

4:30 . Biopolymer particles as stabilizers in PFAS-free firefighting foams. **N. Franklin**, C. Martinez, J.P. Youngblood

MONDAY MORNING

Georgia World Congress Center
B406a

2026 ACS National Award in Surface Chemistry: Symposium in Honor of Andrew J. Gellman

M. Montemore, Organizer
J. R. Kitchin, E. H. Sykes, Organizers, Presiding

8:00 . Withdrawn

8:30 . Synthetic strategies for adding enantioselectivity to metal-based solid catalysts using cinchonidine as the chiral agent. **F. Zaera**

9:00 . Understanding chirality transfer on model single crystal catalysts. **W.T. Tysoe**

9:30 . On-surface chemical dynamics with combined supersonic beam scattering and STM visualization. **S.J. Sibener**

10:00 Break.

10:30 . Functionalized metal surfaces for enantioselective heterogeneous catalysis. **C.J. Baddeley**

11:00 . Studying surface chirality with synchrotron-based spectroscopies. **G. Held**

11:30 . Model systems for heterogeneous catalysts at the atomic scale: Can surface science contribute?. **H. Freund**

Georgia World Congress Center
B218

Colloidal Suspensions of Renewable Polymers

M. Einsla, H. Faizi, V. Sharma, Organizers
D. Chan, L. Gentile, Organizers, Presiding

8:00 Opening remarks.

8:05 . Biobased polymers, nanomaterials, and smart additives in 3D/4D printing. **R. Advincula**

8:30 . Cellulose–sepiolite colloidal hybrids for functional composite films. A. Brattelli, **L. Gentile**

8:55 . Dye-free, sustainable colourimetric sensors made from cellulose/ polymer hybrids. **F. Patel-Burrows**, A. Dumanli, L. Fielding

9:20 . Structure and morphology of amyloid-like protein fibrils in organic media. **A.E. Ashmar**, D. Chan

9:45 Intermission.

10:05 . Tailoring nanocellulose morphology and surface chemistry for different applications. E. Scopel, I. A. Silva, F. F. Meneses, P. S. Ferreira, **C. A. Rezende**

10:30 . Developing an understanding of "messy" nanocellulosic systems: Exploring the correlation between pre-treatment severity, physico-chemical properties, and dispersion behavior. **B. Tardy**

10:55 . Arginine interactions prevent aggregation and hornification of oxidized nanocellulose. R.G. de Lima, D.M. Nascimento, R. Villares Portugal, **J. Bernardes**

11:20 . Structural and lubrication effects of nanocellulose additives in surfactant lamellar formulations. C.M. Sganzerla, A. Bose, P. Garcia, L. Gentile, D. Grecov, G.A. Ferreira, **W. Loh**

11:45 Concluding remarks.

Marriott Marquis
International 6

Hybrid Functional Materials of Polymers and Inorganic Nanoparticles

Synthetic Method for Polymer/inorganic Hybrids

Cosponsored by COLL and PMSE
J. He, L. Liz Marzan, S. Park, Organizers
Y. Lin, Z. Nie, Organizers, Presiding

8:00 . Well-defined functional hybrid materials by ATRP. **K. Matyjaszewski**

8:30 . Hybrid functional materials of polymers and inorganic nanoparticles: From fundamentals to applications. **U.B. Wiesner**

9:00 . Nanoparticle etching controlled by surface-tethered polymer brush molecules. T. Wu, I. Koriakina, **E. Kumacheva**

9:30 . Acceleration and amplification of self healing in brush particle-based hybrid materials. H. Wu, Y. Zhao, T. Autore, K. Matyjaszewski, **M.R. Bockstaller**

10:00 . Symmetry-breaking nanoparticle assembly via polymer crystallization and functionalization. **C. Li**

10:25 Break.

10:30 . Navigating charge separation at designer conjugated polymer/perovskite nanocrystal interface and self-assembly of thermo-responsive magnetic nanocrystals. **Z. Lin**

11:00 . Building triggered color tunability into polymeric composites with perovskite nanocrystals. G. Leone, C. Cueto, E. Speck, **T. Emrick**

11:30 . Polymer brushes: Versatile ligands for nanoparticle-based materials. **R. Macfarlane**

Georgia World Congress Center
B314

Microplastics

Emerging Materials and Strategies for Microplastic Reduction

M. A. Blenner, M. Cush, R. M. Espinosa-Marzal, K. Goodall, J. Jin, G. P. Miller, A. Nason, N. Norman, R. Saha, A. M. Savage, Organizers
S. Kanel, Organizer, Presiding

8:00 Introductory Remarks.

8:05 . Computation-Driven sorbents design for microplastics and PFAS capture and removal. **B. Ma**, B. Lamb, M. Khalifa

8:45 . Re-Imagining Plastics waste as a valuable Feedstock. **L. Korley**

9:25 Intermission.

9:35 . Microplastic remediation and prevention strategies through catalytic deconstruction and polymer redesign. **L. Hamernik**, K. Knauer

10:15 . Tracing anthropogenic impact in remote polar environments. **E. Madenli**, M. Kaleli, S. Akyurekli

10:45 Intermission.

10:55 . Mechanism of quiescent nanoplastic formation from semicrystalline polymers. **S. Kumar**

11:25 . Withdrawn

MONDAY AFTERNOON

Georgia World Congress Center
B406a

2026 ACS National Award in Surface Chemistry: Symposium in Honor of Andrew J. Gellman

M. Montemore, Organizer
J. R. Kitchin, E. H. Sykes, Organizers, Presiding

2:00 . Effects of electric fields and solvents on the energies of adsorbates in catalysis and electrocatalysis. **C.T. Campbell**

2:30 . Crystal engineering of ferri electric organic crystals, by reduction in symmetry of enatiopolar racemates. **M. Lahav**

3:00 . Molecular systems for reversible hydrogen storage: catalysis by bimetallic alloys. **S. Schauermann**

3:30 . Understanding enantioselective interactions by pulling apart molecular rotor complexes. A. Larson, K. Groden, R. Hannagan, E.H. Sykes, **J. McEwen**

4:00 Break.

4:30 . Understanding the reactivity of structurally and electronically complex surfaces. L. Penland, H. Hirushan, N. Dissanayake, **R. Farber**

5:00 . Stabilizing discrete active sites in alloys for sustainable catalysis. **J.F. Weaver**

5:30 . Chirality of atomically precise gold nanoclusters. **R. Jin**

Georgia World Congress Center
B218

Colloidal Suspensions of Renewable Polymers

D. Chan, M. Einsla, H. Faizi, V. Sharma, Organizers
L. Gentile, Organizer, Presiding
C. Otoni, Presiding

2:00 Opening remarks.

2:05 . Overcoming miscibility challenges with personal cleansing formulas by understanding polymer and surfactant systems to enable thickening and active delivery. **E.S. Johnson**, T. Halthur

2:30 . Food-grade pickering emulsions stabilized by nanocelluloses with retained lignin and regioselectively esterified surface. **C. Otoni**

2:55 . Withdrawn

3:20 . Comparative analysis of crosslinking mechanisms in chitosan-based self-standing films. M. Izzi, A. Brattelli, R. Picca, L. Gentile, N. Cioffi, **M. Sportelli**

3:45 Intermission.

4:05 . Complex self-assembly of aqueous cellulose nanocrystal-MXene dispersions. **V.A. Davis**, F. Mekunye, M. Woodmansee

4:30 . Polymeric nanoparticles formed via crystallization on w/o interface. **S. Yu**, C. Li

4:55 . Near-zero-angle depolarized scattering for the precise measurement of optically anisotropic colloids. **E. Moore**, N. Mutzenhardt, R.J. Moon, P.S. Russo, V. Breedveld

5:20 Concluding remarks.

Georgia World Congress Center
B305

Hybrid Functional Materials of Polymers and Inorganic Nanoparticles

Polymer/Nano Composites

Cosponsored by COLL and PMSE
Y. Lin, L. Liz Marzan, S. Park, Organizers
J. He, Z. Nie, Organizers, Presiding

2:00 . Manipulating interactions between polymers and microporous nanoparticles to transport gases in water. **J.A. Mason**, H. Hong, C. DelRe, J. Cho, D.P. Erdosy, J. Calvin

2:30 . Tale of two carbon-capture properties: Bulk and nanofilms of mixed matrix materials. **H. Lin**

3:00 . Polymer templated synthesis of metal-organic framework (MOF) nanostructures and superstructures. **Y. Qin**

3:25 . Direct self-assembly of mesoporous heterostructures with block polymers. **M. Stefik**

3:50 . Stiff and self-healing hydrogels by polymer entanglements in co-planar nanoconfinement. **O.T. Ikkala**, C. Liang, V. Dudko, O. Khoruzhenko, X. Hong, Z. Lv, I. Tunn, M. Umer, J. Timonen, M. Linder, J. Breu, H. Zhang

4:15 Break.

4:25 . Synergistic approach: Using polymers to boost the mechanical strength of ultralight silver nanowire aerogels. **J. Simonato**, M. Touron, C. Celle

4:50 . Tailoring mechanical and viscoelastic properties of polymer nanocomposites via tuning nanofiller configuration. **Z. Meng**

5:15 . Self-assembled boron nanoparticles with tunable surface properties for targeted and stimuli-responsive boron neutron capture therapy (BNCT). **P. Keng**, L. Chen, W. Yi

5:40 . Low-hysteresis cellulose-based hydrogels for strain detecting. **X. Sun**, F. Jiang

Georgia World Congress Center
B314

Microplastics

Characterization Methods

M. A. Blenner, R. M. Espinosa-Marzal, K. Goodall, S. Kanel, G. P. Miller, A. Nason, N. Norman, R. Saha, A. M. Savage, Organizers
J. Jin, Organizer, Presiding

2:00 Introductory Remarks.

2:05 . Transforming microplastic research with machine learning. **J. Xu**

2:35 . Detection of microplastics in cosmetic products. **F. Abbasi**

2:55 . Multi-modal chemical characterization of microplastic particles. **A. Laskin**

3:25 Intermission.

3:40 . Concentration and analysis of aqueous micro- and nanoparticle suspensions. **M.E. Jones**, D.J. Lecaptain

4:10 . Chasing nanoplastics by stimulated Raman scattering microscopy. **W. Min**

4:30 . To be or not to be: Water soluble polymer or microplastic? Advancing analytical techniques to predict critical environmental behaviours. **K. GOODALL**

5:00 Intermission.

5:10 . Infrared correlative nanospectroscopy for nanoplastics characterization. **A. Danilov**, L. Mester, F.S. Weston, T. Gokus

5:30 . QCL-Based spectroscopy for Rapid identification of microplastics. **L. Tisinger**

TUESDAY MORNING

Georgia World Congress Center
B406a

2026 ACS National Award in Surface Chemistry: Symposium in Honor of Andrew J. Gellman

M. Montemore, Organizer
J. R. Kitchin, E. H. Sykes, Organizers, Presiding

8:00 . Forces driving chirality transfer on a platinum surface. S. Khomane, Y. Dong, **P.H. McBreen**

8:30 . Nanostructures with chirality continuum. **N. Kotov**

9:00 Break.

9:30 . Mosquito meets crystal surface. **B.E. Kahr**

10:00 . Enantioselective adsorption on the naturally chiral surface of chiral inorganic nanocrystals. **G. Markovich**, A. Idrees

10:30 Break.

11:00 . Electrochromic nanoscale films. **M.E. Van Der Boom**

Georgia World Congress Center
B305

Hybrid Functional Materials of Polymers and Inorganic Nanoparticles

Polymer/Nano for Bioapplication

Cosponsored by COLL and PMSE
J. He, Y. Lin, L. Liz Marzan, Organizers
Z. Nie, S. Park, Organizers, Presiding

8:00 . Photonic metamaterials made through colloidal crystal engineering with DNA. **C.A. Mirkin**

8:30 . Plasmon-based colorimetric screening for the activity of the cancer biomarker, MMP-14. **H.M. Mattoussi**, N. Dridi, Z. Jin, Q.A. Sang

9:00 . Engineering optical responses with plasmonic nanoparticle-polymer hybrids. **Y. Yin**

9:30 . Rational assembly of 3D functional nanomaterials. **O. Gang**

10:00 Break.

10:05 . Polyelectrolyte-induced functionality of gold nanorods for biological control. **C.J. Murphy**

10:35 . Coating nanoparticles with polydopamine for biological applications. **J. Chen**

11:00 . Controlling chemical interactions in nanoparticle-polymer catalytic composites. **B. Simpkins**, M. tighe, C. Youshaw, T.G. Novak, M.D. Thum

11:20 . Polymer-directed assembly of inorganic nanoparticles for anisotropic functional materials and smart fibers. **K. Song**, A. Ramanathan, D. Patil, X. Sun, Q. Xiang, w. xu

11:40 . Biphasic monolayer adsorption assembly mechanism as a robust route for synthesizing peptoid nanosheets with gold nanoparticles of varying sizes. **E.J. Robertson**, C. Yang, A.S. Soto Carrillo, C. James

Georgia World Congress Center
B405

Microplastics

Bioaccumulation and Toxicity

Cosponsored by YCC
M. A. Blenner, R. M. Espinosa-Marzal, K. Goodall, J. Jin, S. Kanel, G. P. Miller, A. Nason, N. Norman, R. Saha, A. M. Savage, Organizers
M. Cush, Organizer, Presiding

8:00 . Current perspectives of human health impacts from exposure to microplastics: A systematic review. **M. Cush**, E. Shipp, L. Fortunato-Lingens

8:35 . Effects of cadmium, dichlorodiphenyldichloroethylene, and lindane sorbed onto UV weathered mps on toxicity and bioavailability of rtgutgc cells. J. Scott, E. Pereira, K. Forsythe, K. Hess, J. Belden, M. Minghetti, **J. Gonzalez-Estrella**

9:15 Intermission.

9:25 . Effects of particle dimensions on microplastic toxicity in marine invertebrates. **S. Yu**, K. Fetter, A. Gobeil, P. Fuchsman

10:05 . Illuminating the chemical "dark matter" of the plastic waste crisis. **J. Somarelli**

10:40 Intermission.

10:50 . Application of machine learning and feature engineering methods to characterize microplastics' properties. **B. Rasulev**

11:25 . In vitro studies on microplastic removal from human blood using plant derived polymers. **R. Srinivasan**, A. Addison, J. Youngblood

TUESDAY AFTERNOON

Georgia World Congress Center
B3/B4 - EXHIBIT HALL, POSTERS

Microplastics

M. A. Blenner, M. Cush, R. M. Espinosa-Marzal, K. Goodall, J. Jin, S. Kanel, G. P. Miller, A. Nason, N. Norman, R. Saha, A. M. Savage, Organizers

12:00 296. Comparing quality control and calibration strategies for microplastic analysis via py-gc-ms. **R. Smith**, K. Shao, C.D. Freeman, P. Jariwala, D.I. Walker

12:00 297. Testing aflatoxin in food products (corn and barley) by hplc. **I. LAIBOUD**, **C. Laiboud**

12:00 . Withdrawn

12:00 298. Wastewater treatment-driven PETase engineering: Immobilization strategies for targeted microplastic degradation. **S. Su**, J.M. Goddard

12:00 . Withdrawn

12:00 . Withdrawn

12:00 299. Enhanced breast cancer detection: A combined image processing and machine learning approach. **S. Jahan**

12:00 300. Elucidating nanoplastic-hydrogel sorption interactions as a function of the induced volume phase transition of PNIPAM. **N. Detzler**, J. Haider, C. Dutta

12:00 301. Routine data analysis approach for quality control and sample flagging in micro- and nanoplastic quantitation of human samples by Py-GC-HRMS. **C.D. Freeman**, K. Shao, R. Smith, P. Jariwala, D.I. Walker

12:00 302. Resin 3D printing residues: Analysis and characterization by raman spectroscopy, FTIR and electron microscopy. **J. Vicente**, M. Ujueta, B.C. Galarreta

12:00 303. Designing a device to produce microfibers for microplastics research. **O. Dernova**, B.C. Colson, a. michel

12:00 304. Identification of polymers using thermal degradation coupled with SPME-GC-MS. **E.J. Forster**, K.K. Cline

12:00 305. Human and environmental impact of hydrogen cyanide release from the 2015 tianjin chemical explosion. **S.N. Olatunji**, I.O. LASISI, I.S. Salako

12:00 306. Comparing enzymatic and alkaline hydrolysis digestion efficiency for quantifying microplastic particles in blood samples. **P. Jariwala**, C.D. Freeman, A.R. Tovar, R. Smith, K. Shao, D.I. Walker

12:00 307. Evaluation of immunomodulatory activity and subacute toxicity of a novel non-cyanide dried cassava mash (DCM). **S.N. Olatunji**, M. Adebanji, V. Eze

12:00 308. Analysis of microplastics in teeth. **E. Manriquez**, C. Smithhart, O. Davidson, **J.A. Bentley**

WEDNESDAY MORNING

Marriott Marquis
International 7

Hybrid Functional Materials of Polymers and Inorganic Nanoparticles

Self-Assembly of Polymer/Inorganic Hybrids

Cosponsored by COLL and PMSE
Y. Lin, Z. Nie, S. Park, Organizers
J. He, L. Liz Marzan, Organizers, Presiding

8:00 . Polarization optics from chiral composites. **N. Kotov**

8:30 . From Peptide folding to hybrid architectures: Peptide-Guided routes to 2D films and chiral nanomaterials. **K. Nam**

9:00 . Designing nanocrystal–ligand interfaces: From nanoscale forces to functional architectures. **A.R. Tao**

9:30 . Patchy nanoparticles by atomic stenciling. **Q. Chen**

10:00 . Growth of blue fluorescing N-Heterocyclic carbene (NHC)-stabilized gold nanoclusters. N.A. Nosratabad, **Z. Jin**, **H.M. Mattoussi**

10:20 Break.

10:30 . Fundamental insights into nanoparticle loading in swollen polymer gels. **R. Hickey**

11:00 . Cationic brush particles as adsorbents for removal of toxic chaotropic oxyanions from water. **B. Zhao**

11:30 . Toward bimetallic nanowires: Insights from the co-impregnation of block copolymer films. O. Burg, C. Cohen, **R. Shenhar**

WEDNESDAY AFTERNOON

Marriott Marquis
International 7

Hybrid Functional Materials of Polymers and Inorganic Nanoparticles

Processing and Applications of Polymer/Nano Hybrid

Cosponsored by COLL and PMSE
L. Liz Marzan, Z. Nie, S. Park, Organizers
J. He, Y. Lin, Organizers, Presiding

2:00 . E-beam nanofabrication of 1D and 2D photonic crystals in hybrid inorganic–organic films for enhanced emitter coupling. **S. Behera**, V. Heben, P. Stavrinou, G. Frey, A. Facchetti, N. Stingelin

2:20 . Reversible smart responsive materials through interfacial dynamic crosslinking. **M. Rahman**, A.P. Sokolov, T. Saito

2:40 . Lanthanide-containing nanocomposite hydrogels as luminescent platforms for sensing applications. **Y. Yeh**

3:00 . Elucidating formation mechanisms of hybrid polymeric-magnetic nanoparticles in flash nanoprecipitation. T. Sindhu, I.H. Hashmi, S. Biswas, E. Mani, **S. Bandyopadhyay**

3:20 . Factors governing membrane destabilization under pulsed-laser irradiation of plasmonic nanoparticle-loaded polymersomes. **J.C. Griepenburg**, R.L. Salzer, A.N. Shah, C.J. Trout, S.M. O'Malley

3:40 . Nanomedicine for bacterial infections. **L. Yang**

4:00 Break.

4:10 . Power of coordination chemistry: A direct route to high-performance polyMOF membranes for H_2/CO_2 separation. **F.M. Attia**, V. Bui, Y. Jiao, S. Das, S. Singh, H. Lin

4:30 . Preceramic polymer-grafted nanoparticles: Correlating synthesis, microstructure and ceramic conversion. **K. Sabaratne**, B. Stovall, K. Halanayake, M. Dementyev, T. Coutinho de Carvalho, D. Hickey, J. Maria, R. Hickey

4:50 . Developing next generation epoxy liners for trenchless relining. **Y. Tang**, P. MN, K. Flavell, J. Sanders, R. Trask, I. Hamerton

5:10 . Polymer–polyoxometalate interfaces for effective lanthanide recovery. **S. Tushar**, S. Shin, Y. Li, R. Motkuri, M. Momenitaheri, P.K. Thallapally, Z. Peng

5:30 . Design and optimization of glucose-labeled iron oxide nanocrystals for extracellular vesicles. **J. Procida**, H.M. Mattoussi, A. Arbabian, Y. Li, S. Grant