

Division of Colloid and Surface Chemistry
Technical Program

American Chemical Society National Meeting
August 2021
Hybrid: Online and Atlanta, Georgia

COLL Division Non-technical Events

COLL Division Lunch

Sunday, August 22, 12:30 PM - 2:00 PM

Georgia World Congress Center: A411

The lunch will begin with remarks and recognition of awardees and volunteers. Join in-person or online:

<https://american-chemical-society.zoom.us/j/8988852255>

COLL Division Business Meeting (Open)

Sunday, August 22, 6:30 PM – 7:00 PM

Georgia World Congress Center: B201

Or join online: <https://american-chemical-society.zoom.us/j/8988852255>

COLL Division Technical Program

Technical sessions are listed in three types:

- **In-person:** speaker and audience are in-person, no online connection option. In speakers are not able to attend in person, they may pre-record their presentation for playback by session presider.
- **Virtual:** Speaker and audience are online.
- **Hybrid** (or “Broadcast”): An in-person room will be assigned in the convention center, but speakers and audience can also connect online and interact with the in-person attendees.

Note that all poster presenters (in-person or virtual) will be invited to upload their presentation to the virtual poster presentation system. This is strongly encouraged, even if you plan to present in-person.

All times listed are Eastern Daylight Time (EDT, Atlanta local time) (UTC/GMT –4 hours)

COLL Division Technical Symposia, Fall 2021

Langmuir Lectures and ACS Applied Materials and Interfaces Award Lecture

Colloidal nano- and materials intended for biological applications

Organizers: Wolfgang Parak, wolfgang.parak@uni-hamburg.de
Neus Feliu, nfeliu@physnet.uni-hamburg.de

Basic Research in Colloids, Surfactants and Interfaces

Organizer: Ramanathan Nagarajan, Ramanathan.Nagarajan.Civ@mail.mil

Biomaterials and Biointerfaces

Organizers: Yakov Lapitsky, yakov.lapitsky@utoledo.edu
Ryan Wylie, wylie@mcmaster.ca

Nanomaterials

Organizers: Jennifer A. Hollingsworth, jenn@lanl.gov
Ramanathan Nagarajan, Ramanathan.Nagarajan.Civ@mail.mil

Surface Chemistry

Organizers: Steven Tait, tait@indiana.edu
Lorena Tribe, lut1@psu.edu

Fundamental Research in Colloids, Surfaces and Nanomaterials

Organizer: Steven Tait, tait@indiana.edu

COLL Division Program Chair: Steven Tait, tait@indiana.edu

Sunday 08/22/2021

Colloidal nano- and materials intended for biological applications:

Virtual Room Zoom Room 27 (Oral - Virtual, COLL002A)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg; Nicholas Fitzkee, Presider, Mississippi State University

10:30 AM: **Alexander Kros** *One peptide for them all? Gold nanoparticles of different sizes are stabilized by a common peptide amphiphile* (20 minutes, 3582799)

10:50 AM: **Sebastian Schwaminger** *Intermolecular binding within the electrochemical double layer on iron oxide nanoparticles: Effect of potential* (20 minutes, 3584521)

11:10 AM: **Chenyu Liu** *Strategies to improve cell absorption rate: Precise targeting, dual visualization guided, multiple stimulus responsive liposomes for cancer treatment* (20 minutes, 3589551)

11:30 AM: **Jianjun Wei** *Tuning carbon nanodots and its hybrids for cellular uptake and the oxidative stress effect* (20 minutes, 3591678)

11:50 AM: (withdrawn, 3592701)

Colloidal nano- and materials intended for biological applications:

Georgia World Congress Center B206 (Oral - Hybrid, COLL002B)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg; Sebastian Schwaminger, Presider, Massachusetts Institute of Technology

10:30 AM: **Mische Hubbard** *Anti-biofilm activity of chiral graphene quantum dots and their effects on functional bacterial amyloid proteins* (20 minutes, 3596659)

10:50 AM: **Calum Ferguson** *Targeted bioorthogonal prodrug activation enabled by pH responsive classical polymer photocatalysts* (20 minutes, 3594658)

11:10 AM: **Meenakshi Ranasinghe** *Tools for next-generation optogenetics: Synthesis, characterization radioluminescence nanoparticles, and study of x-ray induced behavior of *Caenorhabditis elegans** (20 minutes, 3596761)

11:30 AM: **Abraham Wolcott** *Further advancements in controlling nanoscale diamond chemistry with a brominated surface intermediate* (20 minutes, 3595304)

11:50 AM: **Eric Zhang** *Synthesis of novel hybrid inorganic/organic nanoscintillators for biomedical application* (20 minutes, 3594031)

Sunday 08/22/2021

Biomaterials and Biointerfaces: Gels and Polymer Interactions

Virtual Room Zoom Room 45 (Oral - Virtual, COLL006A)

Yakov Lapitsky, Organizer, Presider, University of Toledo; Ryan Wylie, Organizer, Presider, McMaster University

10:30 AM: **Orlin Velev** *Design of 3D printable homocomposite hydrogels with hierarchical molecular-colloidal networks* (30 minutes, 3590340)

11:00 AM: **Yan Huang** *Tuning the mechanics of protein hydrogels through the Hofmeister effect* (20 minutes, 3589704)

11:20 AM: **Leah Borden** *Electroadhesion in polymer-polymer, polymer-tissue and polymer-plant systems: Deciphering the mechanism* (20 minutes, 3592565)

11:40 AM: **Jessica Guo, Megha Gopal, Emily Zhou** *Optimizing crosslinked hydrogels for brain aneurysm treatment* (20 minutes, 3595709)

12:00 PM: **Yakov Lapitsky** *Tailoring the release properties of alginate gel beads through divalent cation/polyanion coacervation* (20 minutes, 3581017)

Colloidal nano- and materials intended for biological applications:

Virtual Room Zoom Room 29 (Oral - Virtual, COLL002E)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg; Sambeeta Das, Presider, Pennsylvania State University

2:00 PM: **Fernando Herranz** *Bioorthogonal nano-radiomaterials for the non-invasive diagnosis of cardiovascular diseases* (20 minutes, 3578908)

2:20 PM: **Vuk Uskokovic** *On earthicle and other synthetic nanoparticles mimicking the structures of celestial bodies* (20 minutes, 3588160)

2:40 PM: **Kazushige Yokoyama** *Nano-size dependent adsorption of the SARS-CoV-2 spike protein* (20 minutes, 3588792)

3:00 PM: **Nguyen TK Thanh** *DMSA coated cubic iron oxide magnetic nanoparticles for magnetic hyperthermia* (20 minutes, 3588965)

3:20 PM: **Julian Torres** *Synthesis and characterization of graphene oxide-based nanostructures for the delivery of gene therapies* (20 minutes, 3586582)

3:40 PM: **Kosuke Okeyoshi** *Dissipative structures of aqueous polysaccharide dispersions on evaporative interface* (20 minutes, 3587490)

Sunday 08/22/2021

Basic Research in Colloids, Surfactants and Interfaces:

Georgia World Congress Center B405 - B406a (Oral - In-person, COLL004A)
Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Dr. Subin Sahu, Presider,
University of Colorado Boulder

2:00 PM: **Xin Wang** *Dynamic and programmable response of liquid crystals to surface reactions*
(20 minutes, 3586653)

2:20 PM: **Subin Sahu** *Obtaining stable bicontinuous cubic structures in lyotropic liquid crystals*
(20 minutes, 3583480)

2:40 PM: **Emre Bukusoglu** *Nanoparticle adsorption-induced configurations of liquid crystal droplets*
(20 minutes, pre-recorded, 3588200)

3:00 PM: **Soumita Maiti** *Optical response of liquid crystals to external gradients in surfactant concentration* (20 minutes, 3593335)

3:20 PM: **Xin Wang** *Self-propelled liquid crystal droplets that trigger local polymerization* (20 minutes, 3594163)

3:40 PM: **Pat Ayotte** *Confinement effects on the nuclear spin isomer kinetics of water* (20 minutes, 3594016)

Biomaterials and Biointerfaces: Biointerfaces

Georgia World Congress Center B206 (Oral - Hybrid, COLL006C)
Yakov Lapitsky, Organizer, University of Toledo; Ryan Wylie, Organizer, Presider, McMaster University; Alexander Jesmer, Presider, McMaster University

2:00 PM: **Evan Scott** *Engineering the bio/nano interface of soft nanobiomaterials for enhanced drug delivery* (30 minutes, 3595733)

2:30 PM: **Dineli Ranathunga** *Immunomodulatory surface approach for titanium implants* (20 minutes, 3596430)

2:50 PM: **Alexander Jesmer** *Simple fabrication of low-fouling LSPR biosensors on shrinkable substrates*
(20 minutes, 3596049)

3:10 PM: **Yongwook Kim** *Dynamic biointerfaces via stimuli-responsive microstructured polymer brushes*
(20 minutes, 3588027)

3:30 PM: **Hema Choudhary** *Robust and flexible gel-sheet that can rapidly absorb blood* (20 minutes, 3592287)

Sunday 08/22/2021

Basic Research in Colloids, Surfactants and Interfaces:

Virtual Room Zoom Room 32 (Oral - Virtual, COLL004G)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Nikunj Kumar Visaveliya, President, The City College of New York

4:30 PM: **Alessio Zuliani** *Environmentally friendly ZnO/Castor oil polyurethane composites for the efficient gas-phase adsorption of acetic acid* (20 minutes, pre-recorded, 3595183)

4:50 PM: **Nikunj Kumar Visaveliya** *Controllable structural and interfacial characteristics of polymer nanoparticles* (30 minutes, 3593369)

5:20 PM: **Huaxuan Cao** *Pickering emulsions stabilized by inorganic salts flocculated MXene nanosheets and their use for capsules and armored particles formation* (20 minutes, 3581701)

5:40 PM: **Giovanna Poggi** *Castor oil-based organogels as advanced and adaptive tools for the selective and controlled cleaning of works of art* (20 minutes, pre-recorded, 3595137)

6:00 PM: **Andrea Casini** *Colloidal Jin Shofu starch dispersions for the consolidation of paintings* (20 minutes, pre-recorded, 3596177)

Biomaterials and Biointerfaces: Nanomaterials for Delivery and Biointerfaces

Zoom Room 51 (Oral - Virtual, COLL006B)

Yakov Lapitsky, Organizer, President, University of Toledo; Ryan Wylie, Organizer, President, McMaster University

4:30 PM: **Eugenia Kharlampieva** *Self-assembled polymer nanocarriers for controlled delivery* (30 minutes, 3592162)

5:00 PM: **Alexander Kros** *Magnetic-activated cell sorting using coiled-coil peptides: An alternative strategy for isolating cells with high efficiency and specificity* (20 minutes, 3582821)

5:20 PM: **Dylan Dautel** *Engineering pH vesicles from functional fusion proteins* (20 minutes, 3584443)

5:40 PM: **Natalie Boehnke** *Engineering nanoparticle-cell interactions: Using a library-based approach to guide drug carrier design* (20 minutes, pre-recorded, 3584509)

6:00 PM: **Thomas Pho** *Engineering coatings for protein nanoclusters to enable intranasal vaccine delivery* (20 minutes, 3592022)

Sunday 08/22/2021

Biomaterials and Bionterfaces: Biofouling and Antibacterial Interfaces

Georgia World Congress Center B206 (Oral - Hybrid, COLL006D)

Yakov Lapitsky, Organizer, University of Toledo; Ryan Wylie, Organizer, Presider, McMaster University; Dr. Mariano D. Susman, Presider, University of Houston System; Alexander Jesmer, Presider, McMaster University

4:30 PM: **Manjot Kaur Chug** *3D printing nitric oxide-releasing antimicrobial surfaces* (20 minutes, 3593258)

4:50 PM: **Apoorva Vishwakarma** *Can surface associated bacterial biofilms be disrupted without killing the bacteria?* (20 minutes, 3592908)

5:10 PM: **Shahaboddin Saeedi** *Synthesis of a novel N-halamine copolymer with outstanding dry and solution stability and antibacterial efficacy as surface coating* (20 minutes, 3584683)

5:30 PM: **Yun Qian** *S-nitroso-N-acetylpenicillamine grafted silicone for antibacterial applications* (20 minutes, 3590180)

5:50 PM: **Xunhao Wang** *Lip balm drying promotes virus attachment: Characterization of lip balm coatings and XDLVO modeling* (20 minutes, online, 3593152)

Basic Research in Colloids, Surfactants and Interfaces:

Virtual Room Zoom Room 30 (Oral - Virtual, COLL004H)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Stephan Förster, Presider, University of Bayreuth

7:00 PM: **Yuma Sasaki** *Non-close-packed arrays of soft elastomer microspheres through evaporation of aqueous droplets on solid substrates* (20 minutes, 3594498)

7:20 PM: **Fangyuan Dong** *Shape and surface tunable colloidal molecules and their 2D assembly in an electrical field* (20 minutes, 3589214)

7:40 PM: **Stephan Förster** *Soft colloidal and metallic quasicrystals: Two sides of the same medal?* (30 minutes, 3591285)

8:10 PM: **Albanie Hendrickson-Stives** *Alternating current electric field driven assembly of colloidal suspensions using 3D features* (20 minutes, 3588004)

8:30 PM: **Rosangela Mastrangelo** *Soft, macroporous gels to clean artworks: Tailoring structure and morphology through phase-separation of polymer systems* (20 minutes, pre-recorded, 3595135)

Sunday 08/22/2021

Colloidal nano- and materials intended for biological applications:

Georgia World Congress Center Hall B2 (Poster - In-person, COLL003A)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg

7:00 PM: **Shamily Patibandla** *Aptamer conjugated gold nanostar-based distance-dependent nanoparticle surface energy transfer spectroscopy for ultrasensitive detection and inactivation of corona virus* (poster, 3587429)

7:00 PM: **Sama Ghalei** *Halloysite nanotubes as a novel platform for nitric oxide delivery* (poster, 3589015)

7:00 PM: **Anna Izvekova** *Plasma-solution synthesis of nickel-oxygen containing ultrafine particles* (poster, 3580660)

7:00 PM: **Sarah Mell** *Hydrogel encapsulated radioluminescent crystalline colloidal arrays with tunable emissions* (poster, 3585732)

7:00 PM: **Hamed Massoumi** *Nitric oxide-releasing titanium dioxide nanoparticles as a versatile and robust antibacterial agent* (poster, 3593262)

7:00 PM: **Dalephine Davis** *WS₂-gold nanoparticle heterostructure-based novel SERS platform for the rapid identification of antibiotic-resistant pathogens* (poster, 3593963)

Virtual presentation only:

7:00 PM: **Anh Dao** *Facile fabrication and surface modification of silk protein for a versatile drug carrier* (poster, 3586100)

7:00 PM: (withdrawn, 3590371)

Biomaterials and Biointerfaces:

Georgia World Congress Center Hall B4 (Poster - In-person, COLL007A)

7:00 PM: **Mark Garren** *Versatile antifouling, antibacterial coatings from polydopamine surface functionalization of a nitric oxide-releasing substrate* (poster, 3590082)

7:00 PM: **Megan Qualls** *Boronic acid liposomes for drug delivery* (poster, 3584036)

7:00 PM: **Ruhani Sagar** *Ion-responsive release of contents from liposomes for cellular delivery* (poster, 3588869)

7:00 PM: **Jinchao Lou** *Stimuli-responsive liposomal drug delivery platforms for controlled release* (poster, 3593115)

7:00 PM: **Arnab Mondal** *Antibacterial efficacy of polydopamine-assisted nisin immobilized nitric oxide-releasing polydimethylsiloxane* (poster, 3596649)

Sunday 08/22/2021

Nanomaterials

Georgia World Congress Center Hall B4 (Poster - In-person, COLL009A)

7:00 PM: **Nhat Ngo** *Nb-Doped TiO₂, Ta-Doped TiO₂, and Ag@Cu₂O core-shell nanoparticles with enhanced optical properties for photocatalytic applications* (poster, 3589122)

7:00 PM: **Kontee Thongthai** *Au@ZnO, Ag@ZnO, and GS-NS@ZnO core-shell nanoparticles for photocatalysis and gas-sensing applications* (poster, 3588984)

7:00 PM: **Mohamed Hassan** *Monolithic cerium oxide nanoparticles assembly* (poster, 3591482)

7:00 PM: **Jong Moon Lee** *Piezoelectric polymer-nanoparticle composites for flexible and wearable sensors* (poster, 3592377)

7:00 PM: **Nejc Nagelj** *Controlling the reducing power of photoexcited core/shell quantum dots via cation exchange* (poster, 3595011)

7:00 PM: **Maxwell Hoffman** *Core size has a relatively small effect on the radiative rate of CdSe/CdS core/shell quantum dots* (poster, 3595014)

7:00 PM: **Minh Dang Nguyen** *Ferrimagnetic-ferroelectric Fe₃O₄ core nanoparticles with alkaline earth titanate shells* (poster, 3589008)

Basic Research in Colloids, Surfactants and Interfaces:

Georgia World Congress Center Hall B4 (Poster - In-person, COLL005B)

7:00 PM: **Joel Suazo** *Structure-property comparisons, mechanical and thermal properties of molecular gels based on alkanolic acids and ammonium alkanooates* (poster, 3593171)

7:00 PM: **Juan Rosario** *Role of cis and trans double bond on water permeability through a model membrane in the presence and absence of cholesterol: Computational studies* (poster, 3600124)

7:00 PM: **Jorge Villa** *Cation effects on membrane water permeability: Computational study* (poster, 3599735)

Virtual presentation only:

7:00 PM: **Jichuan Qiu** *Swelling-induced symmetry breaking: A versatile approach to the fabrication of colloidal particles with a Janus structure* (poster, online, 3588006)

Sunday 08/22/2021

Fundamental Research in Colloids, Surfaces and Nanomaterials:

Georgia World Congress Center Hall B4 (Poster - In-person, COLL012A)

- 7:00 PM: **Alexandra Koziel** *Why some diselenides give metastable nanocrystalline products* (poster, 3586373)
- 7:00 PM: **Jeremy Espano** *Substituted thioureas and the phase control of nanocrystalline iron sulfides* (poster, 3586379)
- 7:00 PM: **Anna Mills** *Magnetic-core/gold-shell nanoparticles for the detection and quantification of trace contaminants in food products* (poster, 3587090)
- 7:00 PM: **Dana Abdullatif** *Synthesis of a novel pyrene-based polyhedral oligomeric silsesquioxane framework* (poster, 3587152)
- 7:00 PM: **Joelle Miller** *Effect of particle size on the affinity and adsorption kinetics of organic molecules from aqueous solution: An interfacial selective study* (poster, 3587227)
- 7:00 PM: **Zachary Dean Lewis** *Effect of particle size on the affinity and adsorption kinetics of organic molecules from aqueous solution: An interfacial selective study* (poster, 3587227)
- 7:00 PM: **Yunsoo Choi** *Functionalized N-heterocyclic carbene monolayers on gold for surface-initiated polymerizations* (poster, 3589134)
- 7:00 PM: **Elizabeth Bartlett** *STM studies of sequential adsorption of octanethiol and decyl thiocyanate on Au(111)* (poster, 3590196)
- 7:00 PM: **Sydney Brooks** *Atomic and molecular level control over nanoscale structure of helical nanoparticle assemblies* (poster, 3591982)
- 7:00 PM: **Chaoqiuyu Wang** *The structural design and enhanced ionic conductivity of a fused thieno[3,2-b]thiophene based conjugated liquid crystal* (poster, 3593726)
- Virtual presentation only:
- 7:00 PM: **Anh Dao** *Formation of multi-shell Au@Ag@Pt nanoparticles by co-reduction method* (poster, 3594586)

Surface Chemistry:

Georgia World Congress Center Hall B4 (Poster - In-person, COLL011B)

- 7:00 PM: **Mina Omidian** *Oligomeric dimethylsiloxane-terminated self-assembled monolayers for mimicking polydimethylsiloxane surfaces* (poster, 3589685)
- 7:00 PM: **Pooria Tajalli** *Carbonate-terminated self-assembled monolayers for mimicking polycarbonate surfaces* (poster, 3589028)

Monday 08/23/2021

Colloidal nano- and materials intended for biological applications:

Georgia World Congress Center B206 (Oral - Hybrid, COLL002C)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg; Samir Jenkins, Presider, University of Arkansas; Sebastian Schwaminger, Presider, Massachusetts Institute of Technology; Mische Hubbard, Presider, University of Michigan

8:00 AM: **Sambeeta Das** *Steering active colloids in biological fluids* (20 minutes, 3586153)

8:20 AM: **Tae Joon Cho** *Strategic design of stability enhanced Pt^{II} loaded gold nanoparticles as efficient models for nanomedicine* (20 minutes, 3587198)

8:40 AM: **Nicole Navarro** *High-throughput evolution of near-infrared oxytocin nanosensors* (20 minutes, 3587911)

9:00 AM: **Nicholas Fitzkee** *NMR-based approaches for monitoring protein binding and structure on nanoparticle surfaces* (20 minutes, 3594007)

9:20 AM: **Dhanush Amarasekara** *Engineering thermo-responsive gold nanoparticles for photothermal therapy* (20 minutes, 3594983)

Colloidal nano- and materials intended for biological applications:

Georgia World Congress Center B206 (Oral - Hybrid, COLL002D)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg; Sambeeta Das, Presider, Pennsylvania State University; Mische Hubbard, Presider, University of Michigan; Sebastian Schwaminger, Presider, Massachusetts Institute of Technology

10:30 AM: (withdrawn, 3596715)

10:50 AM: (withdrawn, 3592181)

11:10 AM: **Haley Jones** *Fully organic, x-ray radioluminescent crystalline colloidal arrays: Spanning the visible spectrum via x-ray induced, sequential Förster resonance energy transfer (FRET)* (20 minutes, 3588330)

11:30 AM: (withdrawn, 3596403)

11:50 AM: **Shikuan Shao** *Morphology-Invariant nanocages and their application in biosensing* (20 minutes, 3589354)

Monday 08/23/2021

Biomaterials and Biointerfaces: Fundamentals and Applications of Biomaterials

Virtual Room Zoom Room 32 (Oral - Virtual, COLL006E)

Yakov Lapitsky, Organizer, Presider, University of Toledo; Ryan Wylie, Organizer, Presider, McMaster University

- 10:30 AM: **Sumati Bhatia** *Glycosylated biomaterials for meeting the challenge of influenza A virus* (20 minutes, 3588877)
- 10:50 AM: **QiangWei Zhan** *Lecithin adsorption status at the surface determines the size and stability of flash nanoprecipitation prepared nanoparticles* (20 minutes, 3590918)
- 11:10 AM: **David Chelazzi** *Colloidal fibroin dispersions for the reinforcement of aged silk* (20 minutes, 3594317)
- 11:30 AM: **Bo Liu** *Development and characterization of a colorless universal coating with improved stability* (20 minutes, 3583291)
- 11:50 AM: **Jun Gao** *From soluble to insoluble: A mechanistic study on polyelectrolyte complexation based on charge ratio and mixing efficiency* (20 minutes, 3590504)

Colloidal nano- and materials intended for biological applications

Virtual Room Zoom Room 30 (Oral - Virtual, COLL002F)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg; Sambaeta Das, Presider, Pennsylvania State University

- 2:00 PM: **Carlos Fernández-Lodeiro** *New generation synthesis of gold nanostars* (20 minutes, 3587096)
- 2:20 PM: **Harald Stover** *Precipitation polymerization as a route to degradable microgels with tuneable properties* (20 minutes, 3592131)
- 2:40 PM: **Sheilan Sinjari** *Functional microgels by the precipitation polymerization of maleic anhydride and vinyl ethers* (20 minutes, 3592206)
- 3:00 PM: **Carlos Torres, Juan Cruz Jimenez** *Magnetoliposomes for oral drug delivery: Microfluidic-based synthesis and in vitro testing* (20 minutes, 3590697)
- 3:20 PM: **Nikunj Kumar Visaveliya** *Multiscale metal-polymer composite sensor particles for surface-enhanced Raman scattering (SERS) sensing through microfluidics* (20 minutes, 3593412)

Monday 08/23/2021

Basic Research in Colloids, Surfactants and Interfaces:

Georgia World Congress Center B206 (Oral - Hybrid, COLL004B)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Lauren Zarzar, Presider, The Pennsylvania State University

2:00 PM: **Nikhil Subraveti** *Vesicles responsive to oxidants, light, and temperature* (20 minutes, 3592843)

2:20 PM: **Lauren Zarzar** *Chemical design of self-propelled Janus droplets* (20 minutes, 3588886)

2:40 PM: **Avinash Patel, Haotian Zheng** *Oil-water interfacial characteristics of Janus particles constructed by whey protein isolate* (20 minutes, 3596368)

3:00 PM: **Muhammad Redwan Hassan** *Fluorescence studies of small molecule dynamics in toluene/polysorbate-20/water microemulsions* (20 minutes, 3591830)

3:20 PM: **Shan Xue** *Probing internal pressures and long-term stability of nanobubbles in water* (20 minutes, 3580677)

3:40 PM: **Hongxu Liu** *Study of molecular structure impact on the dynamics and size transition of temperature-sensitive supramolecular assemblies* (20 minutes, 3584680)

Basic Research in Colloids, Surfactants and Interfaces:

Georgia World Congress Center B206 (Oral - Hybrid, COLL004C)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Biswajit Sadhu, Presider, Washington State University

4:30 PM: **Biswajit Sadhu** *How phase-modifier works in avoiding third-phase formation? Insight from graph-theoretic analyses and molecular dynamics* (20 minutes, 3592693)

4:50 PM: **Eliandreina Cruz** *Salt-induced diffusiophoresis of a neutral micelle* (20 minutes, 3592751)

5:10 PM: **Haichao Wu** *Connecting hindered transport in porous media across length scales: From single-pore to macroscopic* (20 minutes, 3590637)

5:30 PM: (withdrawn, 3596301)

5:50 PM: **Chuoqiao Chen** *Impact of glass transition temperature on the shear jamming of polymeric particle suspensions* (20 minutes, 3592888)

6:10 PM: **Tingting Lei** *Synthesis, characterization and application of metal bridged carboxylic acid compounds* (20 minutes, 3588667)

Monday 08/23/2021

Biomaterials and Biointerfaces: Microbial Interactions and Biofouling

Virtual Room Zoom Room 31 (Oral - Virtual, COLL006F)

Yakov Lapitsky, Organizer, Presider, University of Toledo; Ryan Wylie, Organizer, Presider, McMaster University

4:30 PM: **David Lynn** *Building bioactivity into slippery liquid-infused porous surfaces* (30 minutes, 3589916)

5:00 PM: (withdrawn, 3596449)

5:20 PM: **Hanwei Liu** *Engineered living material based on protein-mediated bacterial assembly* (20 minutes, 3583796)

5:40 PM: **Rong Yang** *Vapor-deposited biointerfaces for fouling reduction and regulated microbial behaviors* (30 minutes, 3590030)

Basic Research in Colloids, Surfactants and Interfaces:

Virtual Room Zoom Room 33 (Oral - Virtual, COLL004I)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Preston Moore, Presider, University of the Sci in Phila; Dr Fernanda Bononi, Presider, University of North Texas

7:00 PM: **Fernanda Bononi** *A first-principles high-throughput approach towards gashydrates inhibition and promotion* (20 minutes, 3593022)

7:20 PM: **Preston Moore** *Computational investigation of polymer corals* (20 minutes, 3589529)

7:40 PM: **Irene Vettori** *Hydrogels improvements through freeze-casting and anti-freezing additives* (20 minutes, 3578661)

8:00 PM: **Pooja Sahu** *Molecular dynamics study of asymmetric poly(styrene)-block-poly(methacrylic acid) polyelectrolyte-neutral diblock copolymer micellization in aqueous solution* (20 minutes, 3588107)

8:20 PM: **Diling Yang** *Probing the interaction mechanism between air bubbles and bitumen surfaces in complex aqueous solutions* (20 minutes, 3592253)

8:40 PM: **Costanza Montis** *Lamellar and non-lamellar lipid films as synthetic models of biological membranes: The role of symmetry at nano-bio interfaces* (20 minutes, 3591252)

Monday 08/23/2021

Biomaterials and Biointerfaces: Protein Interactions for Self-Assembly and Delivery

Virtual Room Zoom Room 34 (Oral - Virtual, COLL006G)

Yakov Lapitsky, Organizer, Presider, University of Toledo; Ryan Wylie, Organizer, Presider, McMaster University

7:00 PM: **Cheng Zhu** *Assembly of amelogenin secondary structures act as a low-energy template for mineral nucleation* (20 minutes, 3590538)

7:20 PM: **Ryan Wylie** *Biomaterials for immune modulation: Local infusion of antibody immunotherapeutics* (20 minutes, 3590163)

7:40 PM: **Guangzhao Mao** *Targeted delivery of spinal cord injury nanomedicine to motor neurons using retrograde transport proteins* (30 minutes, 3584530)

Sci-Mix: In-person posters

Georgia World Congress Center Hall B4 (Sci-Mix - In-person, COLL999A)

8:00 PM: **Shamily Patibandla** *Aptamer conjugated gold nanostar-based distance-dependent nanoparticle surface energy transfer spectroscopy for ultrasensitive detection and inactivation of corona virus* (poster, 3587429)

8:00 PM: **Hamed Massoumi** *Nitric oxide-releasing titanium dioxide nanoparticles as a versatile and robust antibacterial agent* (poster, 3593262)

8:00 PM: **Zahra Karimi** *Investigating the effect of thermodynamic surface characteristics on attached growth of filamentous algae *Stigeoclonium** (poster, 3590298)

8:00 PM: **Joel Suazo** *Structure-property comparisons, mechanical and thermal properties of molecular gels based on alkanolic acids and ammonium alkanooates* (poster, 3593171)

8:00 PM: **Megan Qualls** *Boronic acid liposomes for drug delivery* (poster, 3584036)

8:00 PM: **Arnab Mondal** *Antibacterial efficacy of polydopamine-assisted nisin immobilized nitric oxide-releasing polydimethylsiloxane* (poster, 3596649)

8:00 PM: **Jong Moon Lee** *Piezoelectric polymer-nanoparticle composites for flexible and wearable sensors* (poster, 3592377)

8:00 PM: **Nejc Nagelj** *Controlling the reducing power of photoexcited core/shell quantum dots via cation exchange* (poster, 3595011)

8:00 PM: (withdrawn, 3590371)

Monday 08/23/2021

Sci-Mix: In-person posters

Georgia World Congress Center Hall B4 (Sci-Mix - In-person, COLL999A)

- 8:00 PM: **Maxwell Hoffman** *Core size has a relatively small effect on the radiative rate of CdSe/CdS core/shell quantum dots* (poster, 3595014)
- 8:00 PM: **Anni Shi** *Polymerization efficiency of striped phase PDA monolayers on 2D materials* (poster, 3585181)
- 8:00 PM: **Pooria Tajalli** *Carbonate-terminated self-assembled monolayers for mimicking polycarbonate surfaces* (poster, 3589028)
- 8:00 PM: **Mina Omidian** *Oligomeric dimethylsiloxane-terminated self-assembled monolayers for mimicking polydimethylsiloxane surfaces* (poster, 3589685)
- 8:00 PM: **Anna Mills** *Magnetic-core/gold-shell nanoparticles for the detection and quantification of trace contaminants in food products* (poster, 3587090)
- 8:00 PM: **Dana Abdullatif** *Synthesis of a novel pyrene-based polyhedral oligomeric silsesquioxane framework* (poster, 3587152)
- 8:00 PM: **Joelle Miller** *Effect of particle size on the affinity and adsorption kinetics of organic molecules from aqueous solution: An interfacial selective study* (poster, 3587227)
- 8:00 PM: **Zachary Dean Lewis** *Effect of particle size on the affinity and adsorption kinetics of organic molecules from aqueous solution: An interfacial selective study* (poster, 3587227)
- 8:00 PM: **Chaoqiuyu Wang** *The structural design and enhanced ionic conductivity of a fused thieno[3,2-b]thiophene based conjugated liquid crystal* (poster, 3593726)

Monday 08/23/2021

Sci-Mix: Virtual posters

Virtual Room (Sci-Mix - Virtual, COLL999B)

- 8:00 PM: **Ataf Ali Altaf** *Nano formulation of Ocimum tenuiflorum essential oil for biological applications* (poster, 3587685)
- 8:00 PM: **Rick Robinson** *Surface-mediated interconnections of nanoparticles towards multi-functional fibrous sensors* (poster, 3596432)
- 8:00 PM: **Diling Yang** *Probing the interaction mechanism between air bubbles and bitumen surfaces in complex aqueous solutions* (poster, 3592253)
- 8:00 PM: **Dariya Ignatenko** *Biopolymer self-coacervation: Liquid-liquid phase separation from concentrated solutions of purified fish scale collagen* (poster, 3581761)
- 8:00 PM: **Eva MarÃ-a Arroyo-Urea** *Nanoemulsions for targeting drug delivery: Formulation design and optimization* (poster, 3587848)
- 8:00 PM: **Uriel Joseph Erasquin** *Methacrylate-based copolymers as biomaterial candidates* (poster, 3596640)
- 8:00 PM: **Mruganka Parasnis** *Designing mycelium foams for bioremediation of heavy metals* (poster, 3594511)
- 8:00 PM: **Sakshi Yadav** *Designed interfaces between proteins and inorganic crystals for templated assembly and co-assembly* (poster, 3595354)
- 8:00 PM: **Nicholas Anderson** *Facile photosynthesis of a stable single-atom Pt catalyst on ultrasmall titanium dioxide stabilized by an engineered Fe defect site* (poster, 3592403)
- 8:00 PM: **Munirat28 Idris** *Molybdenum disulfide-arginine nanosheets for lead ion detection from water: Surface morphology characterization* (poster, 3596086)
- 8:00 PM: **dairong liu** *Probing interfacial properties of iron oxide thin films on noble metal substrate by scanning tunneling microscopy* (poster, 3588013)
- 8:00 PM: **Jichuan Qiu** *Swelling-induced symmetry breaking: A versatile approach to the fabrication of colloidal particles with a Janus structure* (poster, online, 3588006)

Tuesday 08/24/2021

**Langmuir Lectures and ACS Applied Materials and Interfaces Award Lecture: ACS
AMI Award and Colloid and Surface Technology Award**

Georgia World Congress Center B206 (Oral - Hybrid, COLL001B)

Steven Tait, Organizer, Indiana University; Matthew Lynch, President

8:00 AM: *Introductory Remarks* (5 minutes)

8:05 AM: *Introductory Remarks* (5 minutes)

8:10 AM: **Cheng Zhong** *Material design towards advanced zinc-based batteries* (50 minutes, online, 3606560)

9:00 AM: *Introductory Remarks* (5 minutes)

9:05 AM: **John Layman** *Dissolution recycling of polyolefins using alkane solvents* (50 minutes, online, 3606563)

Langmuir Lectures and ACS Applied Materials and Interfaces Award Lecture:

Georgia World Congress Center B206 (Oral - Hybrid, COLL001A)

Steven Tait, Organizer, Indiana University; Matthew Lynch, President

10:30 AM: *Introductory Remarks* (5 minutes)

10:35 AM: *Introductory Remarks* (5 minutes)

10:40 AM: **Ivan Smalyukh** *Mesoporous materials templated by liquid crystals for window applications* (50 minutes, 3597832)

11:30 AM: *Introductory Remarks* (5 minutes)

11:35 AM: **Deborah Leckband** *Proteins at Interfaces: New perspectives on an old problem* (50 minutes, 3601200)

Tuesday 08/24/2021

Colloidal nano- and materials intended for biological applications

Virtual Room Zoom Room 31 (Oral - Virtual, COLL002G)

Neus Feliu Torres, Organizer, Hamburg University; Wolfgang Parak, Organizer, Presider, Universitaet Hamburg

2:00 PM: **Sarah De Marchi** *Plasmonic nanorattles for in situ SERS imaging of cellular metabolism in microbial colonies* (20 minutes, 3586358)

2:20 PM: **Debora Berti** *Probing the mechanical properties of synthetic and biogenic nanosized lipid vesicles with a plasmon-based nanoruler* (20 minutes, 3591592)

2:40 PM: **Laura Munoz** *Magnetite-buforin II nanobioconjugates as active components of novel antimicrobial topical treatment* (20 minutes, 3593943)

3:00 PM: **Wolfgang Parak** *Some new findings about the influence of chirality on the protein corona* (20 minutes, 3595758)

3:20 PM: **Matthias Ballauff** *Interaction of polyelectrolytes tethered to colloidal particles with proteins: Studies by isothermal titration calorimetry* (20 minutes, 3595934)

Basic Research in Colloids, Surfactants and Interfaces:

Georgia World Congress Center B405 - B406a (Oral - In-person, COLL004D)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Laura Bradley, Presider, University of Massachusetts Amherst

2:00 PM: **Olga Kuzminskaya** *Viscosity of polyelectrolyte surfactant complexes (PESCs) - the importance of the choice of polyelectrolyte seen for the case of PDADMAC vs. JR 400* (20 minutes, pre-recorded, 3594735)

2:20 PM: **Laura Bradley** *One-step synthesis of biphasic colloids via dispersion copolymerization* (20 minutes, 3596466)

2:40 PM: **Yihan Zhang** *Bubble size dependent dissolution of oxygen nanobubbles and impacts on agricultural and environmental applications* (20 minutes, 3580707)

3:00 PM: **Louis Corcoran** *Using microemulsion phase behavior as a predictive model for lecithin-tween 80 marine oil dispersant effectiveness* (20 minutes, 3596065)

3:20 PM: **Zahra Karimi** *Investigating the effect of thermodynamic surface characteristics on attached growth of filamentous algae *Stigeoclonium** (20 minutes, 3590298)

3:40 PM: **Shuangxing Liu** *Impact of polymer on the properties of the liquid foam for enhanced oil recovery* (20 minutes, pre-recorded 3589295)

Tuesday 08/24/2021

Nanomaterials: Synthesis-Structure-Function Relationships

Georgia World Congress Center B206 (Oral - Hybrid, COLL008A)

Jennifer Hollingsworth, Organizer, Presider, Los Alamos National Laboratory; Dr

Ramanathan Nagarajan, Organizer, Natick Soldier RDEC

2:00 PM: **Carl Conti** *Investigating mechanisms of dopant deactivation in plasmonic semiconductor nanocrystals* (20 minutes, 3582239)

2:20 PM: **Jason Kuszynski** *Comparison of the Drude model to direct measurement of carrier density and effective mass of Cu_xFeS_4* (20 minutes, 3590799)

2:40 PM: **Jacob Lee** *Surface ligand chemistry-controlled maximization of free carrier density in 2D WO_{3-x} nanoplatelets* (20 minutes, 3591756)

3:00 PM: (withdrawn, 3580112)

3:20 PM: **Ashley Shin** *Dielectric screening modulates semiconductor nanoplatelet excitons* (20 minutes, 3595399)

3:40 PM: **Ming Zhao** *Phase engineering of nanomaterials: The case of ruthenium* (20 minutes, 3589130)

Basic Research in Colloids, Surfactants and Interfaces

Virtual Room Zoom Room 30 (Oral - Virtual, COLL004J)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Amanda Koh, Presider,

University of Alabama

4:30 PM: **Futoon Aljirafi** *Dispersing crude oils of varying viscosities using a food-grade dispersant* (20 minutes, 3592965)

4:50 PM: **Amanda Koh** *Fundamental characterization of alkanethiol surface adsorption and self-assembly for MRF stabilization* (20 minutes, 3593999)

5:10 PM: **Vanessa Rosciardi** *Designing green poly(vinyl-alcohol)/starch cryogels: A focus on the amylose/amylopectin structural role* (20 minutes, 3595173)

5:30 PM: **Xiao-Ying Yu** *Multimodal imaging of oil-in-water bilgewater emulsion and biofilms* (20 minutes, 3595859)

5:50 PM: **Yuma Hamada** *Characterization of microemulsions dispersed in l-menthol based hydrophobic deep eutectic solvent as potential carriers for transdermal drug delivery* (20 minutes, 3587633)

6:10 PM: **Valentina Jaramillo** *Emulsions of lavender essential oil and CW49 peptide for healing assays in a 2D monolayer of human keratinocytes* (20 minutes, 3592274)

Tuesday 08/24/2021

Nanomaterials: Synthesis-Structure-Function Relationships

Georgia World Congress Center B206 (Oral - Hybrid, COLL008B)

Jennifer Hollingsworth, Organizer, Presider, Los Alamos National Laboratory; Dr

Ramanathan Nagarajan, Organizer, Natick Soldier RDEC

4:30 PM: **Matthew Jones** *Ligand-derived nanoparticle mechanochemistry* (20 minutes, 3594347)

4:50 PM: **Robert Macfarlane** *Single-crystal winterbottom constructions of nanoparticle superlattices* (20 minutes, 3584098)

5:10 PM: **Manuel Dominguez** *Assembly of linked nanocrystal colloids by reversible covalent bonds* (20 minutes, 3588958)

5:30 PM: **Taylor Woehl** *Visualizing ligand mediated formation pathways of alloyed nanocrystal formation with liquid phase transmission electron microscopy* (20 minutes, 3587086)

5:50 PM: **Preston Snee** *Tuning excitation dynamics in core/shell heterostructures: Type-II giant quantum dots and efficient reducing agents* (20 minutes, 3592709)

6:10 PM: **Ayaskanta Sahu** *Elucidating the origin of tunable intra-band optical transitions in Ag₂Se colloidal quantum dots and their potential utilization for infrared photodetectors* (20 minutes, 3593715)

Surface Chemistry

Georgia World Congress Center B405 - B406a (Oral - In-person, COLL010B)

Steven Tait, Organizer, Presider, Indiana University; Lorena Tribe, Organizer, Penn State Berks

4:30 PM: **Ayushi Tripathi** *Using liquid crystals to study elementary surface reactions on noble metal surfaces* (20 minutes, pre-recorded, 3592904)

4:50 PM: **Ariel Furst** *Reagentless modification of surfaces with biomolecules* (20 minutes, 3589054)

5:10 PM: **Jing Zhou** *Preparation of highly fluorescent blue emitting CsPbX₃ (X=Br,Cl) nanocrystals using calcium salts* (20 minutes, 3597116)

5:30 PM: **Hom Sharma** *Development of general kinetic model for moisture outgassing from silica-filled silicones* (20 minutes, 3596530)

5:50 PM: (withdrawn, 3580906)

Tuesday 08/24/2021

Basic Research in Colloids, Surfactants and Interfaces:

Virtual Room Zoom Room 30 (Oral - Virtual, COLL004K)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Gloria Viner, Presider, Daemen College

- 7:00 PM: **Gloria Viner** *Comparative study of interfacial properties between home-made personal vs commercially-made care products* (20 minutes, 3589648)
- 7:20 PM: **Jayati Arora, Anuj Ranjan, Abhishek Chauhan** *Surfactant pollution in water bodies and its microbial degradation* (20 minutes, 3595972)
- 7:40 PM: **Teresa Guaragnone** *pHEMA/PAA and pHEMA/PVP semi-IPNs: effect of pH and loading with tetraethylenepentamine for the removal of bronze corrosion products* (20 minutes, 3596223)
- 8:00 PM: **Emily Harasin** *Molecularly imprinted polymers as materials for sensing antibacterials in food matrices* (20 minutes, 3596589)
- 8:20 PM: **Wellstandfree K. Bani** *Experimental study on the effect of gravity on the vertically flowing down water jets* (20 minutes, 3580668)

Basic Research in Colloids, Surfactants and Interfaces:

Virtual Room (Poster - Virtual, COLL005A)

- 7:00 PM: **Joonyeong Kim** *Surface properties of torrefied cardboard and hydrocarbon adsorption properties via inverse gas chromatography and complementary analytical methods* (poster, 3580414)
- 7:00 PM: **Dariya Ignatenko** *Biopolymer self-coacervation: Liquid-liquid phase separation from concentrated solutions of purified fish scale collagen* (poster, 3581761)
- 7:00 PM: **Zhiyong Liu, Xuhong Guo** *Interaction between spherical polyelectrolyte brushes and gold nanoparticles studied by small angle X-ray scattering* (poster, 3590594)
- 7:00 PM: **Uriel Joseph Erasquin** *Methacrylate-based copolymers as biomaterial candidates* (poster, 3596640)
- 7:00 PM: (withdrawn, 3587848)

Tuesday 08/24/2021

Surface Chemistry:

Virtual Room (Poster - Virtual, COLL011A)

- 7:00 PM: **Dairong Liu** *Probing interfacial properties of iron oxide thin films on noble metal substrate by scanning tunneling microscopy* (poster, 3588013)
- 7:00 PM: **Muhammad Naveed** *Next-generation self-healing and self-cleaning hybrid smart coatings* (poster, 3593107)
- 7:00 PM: **Ajmir Khan** *Self-healing and self-cleaning clear coating* (poster, 3593127)

Biomaterials and Biointerfaces:

Virtual Room (Poster - Virtual, COLL007B)

- 7:00 PM: **Xiaobei Huang** *Supramolecular micelles as a multifunctional theranostic agent for synergistic photodynamic therapy and hypoxia-activated chemotherapy* (poster, 3583456)
- 7:00 PM: **Karsten Hinrichs** *Infrared microfluidic biosensing of submonolayers* (poster, 3587094)
- 7:00 PM: **Ipsita Banerjee** *In silico studies of newly designed bioorganic peptide conjugates for targeting over-expressed tumor receptors* (poster, 3588657)
- 7:00 PM: **Abdullah Baawad** *Gellan gum diffusion through bone and osteodifferentiation of bone marrow stem cells* (poster, 3593159)
- 7:00 PM: **Mruganka Parasnis** *Designing mycelium foams for bioremediation of heavy metals* (poster, 3594511)
- 7:00 PM: **Dinesha Agosthinghage Dona** *In vitro assessment of composite hydrogel materials for the regeneration of load-bearing soft tissues* (poster, 3589997)
- 7:00 PM: **Md Qaiyum** *Dewaxed honeycomb an efficient and promising biomaterial for scavenging malachite green from water* (poster, 3595601)
- 7:00 PM: **Sakshi Yadav** *Designed interfaces between proteins and inorganic crystals for templated assembly and co-assembly* (poster, 3595354)

Tuesday 08/24/2021

Nanomaterials

Virtual Room (Poster - Virtual, COLL009B)

7:00 PM: **Munirat Idris** *Molybdenum disulfide-arginine nanosheets for lead ion detection from water: Surface morphology characterization* (poster, 3596086)

7:00 PM: **Eduardo Ravelo-Nieto** *Synthesis, functionalization and characterization of silica nanoparticles and fullerene: Potential platforms for cell penetration vehicles* (poster, 3595824)

7:00 PM: **Antonios Kouloumpis** *Antibacterial germanene monolayer films by the Langmuir-Blodgett assembly* (poster, 3589536)

7:00 PM: **Amber Lee Royal** *Near-Infrared sensitive silica-gold core shell nanostructures for photothermal ablation* (poster, 3595057)

7:00 PM: **Xuhong Guo** *Encapsulation drugs with various hydrophobicity using sophorolipids by flash nanoprecipitation* (poster, 3590586)

7:00 PM: **Shreyasi Sengupta** *Synthesis, characterization and environmental impact of InSe 2D nanomaterials* (poster, 3592486)

7:00 PM: **Vivek Arjunan Vasantha** *Salt-responsive photonic crystal from monodisperse zwitterionic microspheres* (poster, 3591247)

7:00 PM: **Nicholas Anderson** *Facile photosynthesis of a stable single-atom Pt catalyst on ultrasmall titanium dioxide stabilized by an engineered Fe defect site* (poster, 3592403)

Colloidal nano- and materials intended for biological applications

Virtual Room (Poster - Virtual, COLL003B)

7:00 PM: **Rick Robinson** *Surface-mediated interconnections of nanoparticles towards multi-functional fibrous sensors* (poster, 3596432)

7:00 PM: **Ataf Ali Altaf** *Nano formulation of Ocimum tenuiflorum essential oil for biological applications* (poster, 3587685)

Tuesday 08/24/2021

Fundamental Research in Colloids, Surfaces and Nanomaterials

Virtual Room (Poster - Virtual, COLL012B)

- 7:00 PM: **Kuo-Hao Chen, Cody Leasor, Zhihai Li** *Molecular adsorption and phase transition of aromatic carboxylic acids at electrode-electrolyte interfaces* (poster, 3587946)
- 7:00 PM: **Cole Pridemore** *Molecularly imprinted polymers with differing template molecules characterized by atomic force microscopy* (poster, 3596625)
- 7:00 PM: **Tharushi Ambagaspitiya** *Synthesis and characterization of molecularly imprinted polymers using sum frequency generation spectroscopy* (poster, 3596632)
- 7:00 PM: **Dan Lin** *Robust waterborne superhydrophobic coatings with reinforced composite interfaces* (poster, 3590339)
- 7:00 PM: **Christine Heinecke** *Role of counterions on size of para-mercaptobenzoic acid capped magic number gold clusters* (poster, 3596508)
- 7:00 PM: **Sicheng Yuan** *A mechanically robust slippery surface with corn-like structures fabricated by in-situ growth of TiO₂ on attapulgite* (poster, 3590350)
- 7:00 PM: **Karsten Hinrichs** *Infrared Polarimetry: Anisotropy of a single and a bundle of touch-spun PCL - nanofibers* (poster, 3595153)
- 7:00 PM: **Binglin Guo** *Attachment of cerium oxide nanoparticles with different surface charges to kaolinite: Macroscopic and microscopic variations in kaolinite surface properties* (poster, 3596190)

Wednesday 08/25/2021

Basic Research in Colloids, Surfactants and Interfaces

Georgia World Congress Center B206 (Oral - Hybrid, COLL004E)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Christopher Wirth, Presider, Cleveland State University

8:00 AM: **Cindy Qiu** *Characterizing the hydrophobic interactions of fusion peptides of coronaviruses using single-molecule force measurements* (20 minutes, 3592765)

8:20 AM: **Christopher Wirth** *Investigation and analysis of scattered light from colloidal spheroids with scattering morphology resolved total internal reflection microscopy (SMR-TIRM)* (30 minutes, 3596503)

8:50 AM: **Jason Calvin** *Organic ligand shell structure in colloidal quantum dots revealed through isothermal titration calorimetry, quantitative ¹H NMR, and X-ray diffraction* (20 minutes, 3589905)

9:10 AM: **Zihao Ou** *Unraveling nonclassical crystallization and growth pathways of nanoparticle superlattices via liquid-phase TEM imaging* (20 minutes, 3586102)

9:30 AM: **Zachary Stroupe** *Design and development of a quartz microbalance-based ethylene detector* (20 minutes, 3596637)

Basic Research in Colloids, Surfactants and Interfaces

Georgia World Congress Center B206 (Oral - Hybrid, COLL004F)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Alex Smirnov, Presider, North Carolina State University

10:30 AM: **Cindy Tseng** *Influences of electrochemical charge transfer on interfacial electric field* (20 minutes, 3578770)

10:50 AM: **Zening Liu** *Insight into the influence of anions on ionic oligomer membrane formation and structural change* (20 minutes, 3596176)

11:10 AM: **Alex Smirnov** *Dielectric and electrostatic properties of silica nanoparticle/water Interface* (30 minutes, 3596707)

11:40 AM: **Erin Lang** *Oleylamine impurities regulate temperature-dependent hierarchical assembly of ultranarrow gold nanowires on biotemplated 2D material interfaces* (20 minutes, 3593069)

12:00 PM: **Yifeng Shi** *Removal of capping agent from Pd nanocubes without destructing their surface structure for the maximization of catalytic activity* (20 minutes, 3588041)

Wednesday 08/25/2021

Nanomaterials: Applications in Biology and Medicine

Virtual Room Zoom Room 28 (Oral - Virtual, COLL008F)

Jennifer Hollingsworth, Organizer, Los Alamos National Laboratory; Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Nguyen TK Thanh, Presider, University College London

- 10:30 AM: **Nguyen TK Thanh** *Synthesis of magnetic nanoparticles for MRI and hyperthermia treatment* (20 minutes, 3589021)
- 10:50 AM: **Joan Manuel Galindo** *Synthesis, oxidation, and characterization of carbon dots as nanoplatforms for cell penetration: Experimental and in silico analyses* (20 minutes, 3589975)
- 11:10 AM: **Jun-Ray Macairan** *Utilizing carbon dots as multisensing imaging probes* (20 minutes, 3591861)
- 11:30 AM: **Istvan Szilagy** *Broad-spectrum radical scavenging nanocomposites by co-immobilization of antioxidant enzymes* (20 minutes, 3589373)
- 11:50 AM: **Dylan Steer** *Co-assembly of semiconducting anisotropic nanocrystals with lipid membranes* (20 minutes, 3592619)
- 12:10 PM: **Vyshnavi Karra** *The development of a MARTINI coarse-grained model for Rosette nanotubes* (20 minutes, 3592769)

Surface Chemistry

Virtual Room Zoom Room 29 (Oral - Virtual, COLL010C)

Steven Tait, Organizer, Indiana University; Lorena Tribe, Organizer, Penn State Berks; Rong Ye, Presider, Cornell University

- 10:30 AM: **Kingsley Chukwu** *Effects of aprotic and protic polar co-adsorbates on C-OH and O-H bond cleavages* (20 minutes, 3596864)
- 10:50 AM: **Swetlana Schauer** *Understanding ligand-directed heterogeneous catalysis: When the dynamically changing nature of the ligand layer controls the hydrogenation selectivity* (20 minutes, 3586514)
- 11:10 AM: **Wilson Oyola** *Emulsions stability by functionalized Fe₂O₃ NPs and catalytic reactivity* (20 minutes, 3586695)
- 11:30 AM: **Mustafa Karatok** *Controlling the selectivity of formic acid decomposition on Pd-Ag surface alloys: The interplay between two metals* (20 minutes, 3582281)
- 11:50 AM: **Hoan Nguyen** *Synergistic study of thermal decomposition of acetic acid on Pd(111) using ambient pressure X-ray photoelectron spectroscopy (AP-XPS) and density functional theory (DFT)* (20 minutes, 3596821)

Wednesday 08/25/2021

Colloidal nano- and materials intended for biological applications

Virtual Room Zoom Room 29 (Oral - Virtual, COLL002H)

Neus Feliu Torres, Organizer, Presider, Hamburg University; Wolfgang Parak, Organizer, Universitaet Hamburg

2:00 PM: **Yoonsoo Pang** *Emission enhancement by dipole and quadrupole surface plasmons of silver nanosurfaces* (20 minutes, 3595911)

2:20 PM: **Casey Folks** *Fabrication of plasmonic-organic nanocomposites for reliable in situ optical biosensing* (20 minutes, 3596759)

2:40 PM: **Sina Khorsandi** *Using MUSIC to stimulate the immune system* (20 minutes, 3587370)

3:00 PM: **Sinan Sabuncu** *Biodegradable gas stabilizing nanoparticles for tumor ablation* (20 minutes, 3596937)

3:20 PM: **Jessica Rouge** *Expanding the chemistry and cargo compatibility of DNA-micelle delivery systems* (20 minutes, 3593699)

Nanomaterials: Synthesis and Device Integration for Function

Virtual Room Zoom Room 30 (Oral - Virtual, COLL008G)

Jennifer Hollingsworth, Organizer, Los Alamos National Laboratory; Dr Ramanathan Nagarajan, Organizer, Presider, Natick Soldier RDEC

2:00 PM: **Demet Asil** *Donor-acceptor type bulk nano-heterojunction solar cell designs based on electronically coupled PbSe nanorods and quantum dots* (20 minutes, 3586187)

2:20 PM: **Daniel Garcia-Lojo** *Integration of plasmonic supercrystals on a microfluidic platform to obtain ultrasensitive and selective SERS detection sensor* (20 minutes, 3586307)

2:40 PM: **Juan Buitrago** *Development of flexible and transparent photoelectrochemical cells based on the light-harvesting complexes of *Chlamydomonas reinhardtii* immobilized on graphene* (20 minutes, 3593307)

3:00 PM: **Qilin Wei** *Silica-coating-assisted nitridation of TiO₂ nanoparticles and their photothermal property* (20 minutes, 3595856)

3:20 PM: **Quynh Nguyen** *Simple route to the synthesis of Pt nanobars and the mechanistic understanding of symmetry reduction* (20 minutes, 3588415)

3:40 PM: **Ruhui Chen** *Improving the purity and uniformity of Pd and Pt nanocrystals by decoupling growth from nucleation in a flow reactor* (20 minutes, 3590466)

Wednesday 08/25/2021

Surface Chemistry

Georgia World Congress Center B206 (Oral - Hybrid, COLL010A)

Steven Tait, Organizer, Presider, Indiana University; Lorena Tribe, Organizer, Penn State Berks

2:00 PM: **Christopher Crain** *Cyclopropane adsorption on the graphite and MgO(100) surfaces: A microscopic and thermodynamic investigation* (20 minutes, 3596769)

2:20 PM: **Carson Mize** *Bridging the coverage gap in adsorption models of atomic oxygen on the Ag(111) surface* (20 minutes, 3593561)

2:40 PM: **Steven Tait** *Ligand and surface cooperativity in the stabilization of metal-ligand single-site catalysts at surfaces* (20 minutes, 3597795)

3:00 PM: (withdrawn, 3593942)

3:20 PM: **James Condon** *Quantum mechanical modeling of physical adsorption and disproof of the BET* (20 minutes, 3583714)

3:40 PM: **Ashraf Ali** *Enhancement of electrocatalytic hydrogen evolution reaction using noble metal free hybrid molybdenum chalcogenide/graphene nanocomposites: A combined computational and experimental investigation* (20 minutes, 3593114)

Basic Research in Colloids, Surfactants and Interfaces

Virtual Room Zoom Room 30 (Oral - Virtual, COLL004L)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Manh Thuong Nguyen, Presider, PNNL

4:30 PM: **Karsten Hinrichs** *Ultrathin functionalization of silicon surfaces* (20 minutes, 3586878)

4:50 PM: **Yi peng Li** *Nano coating on the surface of polymer substrate* (20 minutes, 3593812)

5:10 PM: **Raviteja Kurapati** *Effect of stereochemistry and ionization on structure and solvation properties of polycarboxylic acids at oil-water interface* (20 minutes, 3588780)

5:30 PM: **Manh Thuong Nguyen** *Adsorption of H₂O and Pb(II) at graphene oxide/water interfaces: Role of functional groups* (20 minutes, 3595445)

5:50 PM: **Zilong Liu** *Studying surfactant adsorption at rock-liquid interface using electrochemical quartz crystal microbalance* (20 minutes, 3586987)

6:10 PM: **Gloria Viner** *Comparative study of interfacial properties using home-built devices vs references values* (20 minutes, 3589638)

Wednesday 08/25/2021

Nanomaterials: Synthesis-Structure-Function Relationships

Georgia World Congress Center B206 (Oral - Hybrid, COLL008C)

Jennifer Hollingsworth, Organizer, Presider, Los Alamos National Laboratory; Dr

Ramanathan Nagarajan, Organizer, Natick Soldier RDEC

4:30 PM: **Ji-Young Kim** *Light-induced chiral metal superstructure on substrate* (20 minutes, 3607775)

4:50 PM: **John Dunlap** *Competitive binding of monodentate ligands on aqueous core/shell quantum dots*
(20 minutes, 3596479)

5:10 PM: (withdrawn, 3595605)

5:30 PM: **J. Nathan Hohman** *Engineering 2D Phases from 3D Materials* (20 minutes, 3597027)

5:50 PM: **Ying Bao** *Developing and understanding formation of SERS-active 2D gold nano-snowflakes with detailed morphology control* (20 minutes, 3583743)

6:10 PM: **Vladimir Kolosov** *Novel transrotational solid state order discovered by transmission electron microscopy for crystallizing amorphous films* (20 minutes, 3589858)

Basic Research in Colloids, Surfactants and Interfaces

Virtual Room Zoom Room 29 (Oral - Virtual, COLL004M)

Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC; Bryan Berger, Presider,

University of Virginia

7:00 PM: **Johana Pérez Bejarano** *Rationally designed peptides with interfacial activity: A molecular dynamics study at the decane/water interface* (20 minutes, 3596182)

7:20 PM: **Bryan Berger** *Engineering, characterization and application of designed biosurfactants*
(20 minutes, 3596949)

7:40 PM: **Halil Okur** *Elucidating lipid monolayers at the oil/water interface* (20 minutes, 3597108)

8:00 PM: **Mina Sakuragi** *Interaction between monoterpene-based deep eutectic solvents and stratum corneum* (20 minutes, 3582482)

8:20 PM: **Kazushige Yokoyama** *Nano-size dependent aggregates formation of Amyloidogenic peptide coated gold particles* (20 minutes, 3596737)

8:40 PM: **Ann-Dorie Webley** *Local distribution of limonene in phospholipid vesicles* (20 minutes, 3596779)

Wednesday 08/25/2021

Nanomaterials: Fundamentals in Chemistry and Properties

Virtual Room Zoom Room 30 (Oral - Virtual, COLL008H)

Jennifer Hollingsworth, Organizer, Los Alamos National Laboratory; Dr Ramanathan

Nagarajan, Organizer, Presider, Natick Soldier RDEC

7:00 PM: **Kui Yu** *Evolution of colloidal semiconductor compound magic-size clusters and quantum dots* (20 minutes, 3593515)

7:20 PM: **Nabila Jarmouni** *Quantum size effect in formamidinium lead bromide $\text{CH}(\text{NH}_2)_2\text{PbBr}_3$ perovskite quantum dots by precipitation at different temperatures* (20 minutes, 3588757)

7:40 PM: **Dineshkumar Sengottuvelu** *Multicolor emissive nitrogen-doped carbon quantum dots and their photophysical and solvatochromism studies* (20 minutes, 3596609)

8:00 PM: **Keenan Mintz** *Development of structural models for three carbon dots* (20 minutes, 3589308)

8:20 PM: **Scott McGuire** *Reconciling structure prediction of alloyed, ultrathin nanowires with spectroscopy* (20 minutes, 3586559)

8:40 PM: **Miroslava Nedyalkova** *Machine learning optimization procedure framework for magnetite nanocrystal clusters* (20 minutes, 3593871)

Thursday 08/26/2021

Nanomaterials: Properties and Applications

Georgia World Congress Center B206 (Oral - Hybrid, COLL008D)

Jennifer Hollingsworth, Organizer, Presider, Los Alamos National Laboratory; Dr

Ramanathan Nagarajan, Organizer, Natick Soldier RDEC

8:00 AM: (withdrawn, 3586881)

8:20 AM: **Janire Bahamonde** *Plant-based polymeric nano-drug delivery systems for Intestinal Infections Investigation* (20 minutes, 3587295)

8:40 AM: **Mohtashim Shamsi** *Unique interfacial character of DNA repeat sequences* (20 minutes, 3594035)

9:00 AM: **Fiaz Ahmed** *AgBiS₂ quantum dot ink for solution processable optoelectronics* (20 minutes, 3596448)

9:20 AM: **Urice Tohgha** *Influence of semiconductor quantum dots on liquid crystal phases and optical properties* (20 minutes, 3586329)

9:40 AM: **Bofan Zhao** *Plasma discharge across metal nanoparticle surfaces and plasma-driven CO₂ reduction to CO and higher order hydrocarbons* (20 minutes, 3588662)

Nanomaterials: Fundamentals in Chemistry and Properties

Virtual Room Zoom Room 29 (Oral - Virtual, COLL008I)

Jennifer Hollingsworth, Organizer, Los Alamos National Laboratory; Dr Ramanathan

Nagarajan, Organizer, Natick Soldier RDEC; Sangchul Roh, Presider, Cornell University

10:30 AM: **Nathan Green** *Gold nanorod energy transfer complexes: Nanoscale engineering with DNA origami* (20 minutes, 3585233)

10:50 AM: **Pratibha Mahale** *Particle assembly as templates for synthesis of 3D interconnected oxide-free Ge nanostructures* (20 minutes, 3592002)

11:10 AM: **Sangchul Roh** *Straining soft nanofiber forests using liquid crystals and emergent electro-optical properties* (20 minutes, 3592468)

11:30 AM: **Christopher Sims** *Impact of surfactant chemistry on single-wall carbon nanotube extraction conditions in aqueous two-polymer phase extraction* (20 minutes, 3592289)

11:50 AM: **Daisuke Suzuki** *Design, fabrication, and characterization of microgels with defined nanostructures* (20 minutes, 3595937)

Thursday 08/26/2021

Surface Chemistry:

Georgia World Congress Center B206 (Oral - Hybrid, COLL010E)

Steven Tait, Organizer, Presider, Indiana University; Lorena Tribe, Organizer, Penn State Berks

10:30 AM: **Anni Shi** *Polymerization efficiency of striped phase PDA monolayers on 2D materials* (20 minutes, 3585181)

10:50 AM: **Xing He** *Thickness-dependent ordering of ethanol nanofilms on graphite* (20 minutes, 3587472)

11:10 AM: **Julia Murphy** *Seeking perfection in polymer nanopatterns: In situ imaging of block copolymer dynamics with environmentally controlled high-speed AFM* (20 minutes, 3591279)

11:30 AM: **Indrani Bhattacharyya, Prantik Mazumder** *Interface architecture for reliable adhesion between glass and polymer* (20 minutes, online, 3594737)

11:50 AM: **Ramin Ordikhani Seyedlar** *In-depth analysis on the superhydrophobic metal surfaces fabricated by laser textured treatment and chemical modification process* (20 minutes, online, 3595040)

12:10 PM: **Ming Zhou** *Synergistic lubricating effect of graphene/ionic liquid composite material used as an additive* (20 minutes, 3595941)

Nanomaterials: Surface Chemistry

Virtual Room Zoom Room 27 (Oral - Virtual, COLL008J)

Jennifer Hollingsworth, Organizer, Los Alamos National Laboratory; Dr Ramanathan Nagarajan, Organizer, Presider, Natick Soldier RDEC

2:00 PM: **Sunghyun Nam** *Effects of integration location of silver nanoparticles for cotton fiber on their washing durability* (20 minutes, 3584709)

2:20 PM: **Liu Xiaolin** *Tribological performance studies of waterborne polyurethane coatings with aligned modified Graphene oxide@Fe₃O₄* (20 minutes, 3595614)

2:40 PM: **Asli Celebioglu** *Fast-dissolving dietary supplement based on nanofibrous webs of curcumin/cyclodextrin inclusion complexes* (20 minutes, 3588557)

Thursday 08/26/2021

Surface Chemistry:

Georgia World Congress Center B206 (Oral - Hybrid, COLL010F)

Steven Tait, Organizer, Presider, Indiana University; Lorena Tribe, Organizer, Penn State Berks

2:00 PM: **Fatima Anwar** *Ultrathin chromia on a hexagonally-ordered d^0 ferromagnet: Evidence of interfacial exchange bias at the $\text{Cr}_2\text{O}_3/\text{TiO}_{2-x}$ interface* (20 minutes, 3595843)

2:20 PM: **Mingzhao Liu** *Resolving the evolution of atomic layer deposited thin film growth by continuous in situ X-ray absorption spectroscopy* (20 minutes, 3588487)

2:40 PM: **Emily Sprague-Klein** *Understanding surface plasmon-driven electron transfer by modulating the electronic affinity of polypyridine molecules adsorbed on single gold nanoparticles* (20 minutes, online, 3590377)

3:00 PM: **Katharine Tibbetts** *Deposition and growth of metal nanoparticles with controllable size and shape onto silicon laser-induced periodic surface structures* (20 minutes, 3587016)

3:20 PM: **Hui Sun** *Template-directed growth of silk nanofibrils: From assembly dynamics to nanomechanics* (20 minutes, 3589819)

Nanomaterials: Properties and Applications

Georgia World Congress Center B206 (Oral - Hybrid, COLL008E)

Jennifer Hollingsworth, Organizer, Presider, Los Alamos National Laboratory; Dr Ramanathan Nagarajan, Organizer, Natick Soldier RDEC

4:30 PM: **Yixin Xu** *Xenon trapping in metal-supported silica nanocages* (20 minutes, 3588218)

4:50 PM: (withdrawn, 3597068)

5:10 PM: **Minghao Xie** *Pt-Co truncated octahedral nanocrystals: A class of highly active and durable catalysts toward oxygen reduction* (20 minutes, 3588543)

5:30 PM: **Yi Gao** *Chemical insight of the thiolate ligands on the gold nanoclusters* (20 minutes, 3590806)

5:50 PM: **Simona Hunyadi Murph** *Rational design of nanostructures: Fabrication, properties and applications* (20 minutes, 3589586)

6:10 PM: **Ashish Nag** *One-step synthesis of carbon-supported ultrasmall transition metal nanoparticles using femtosecond laser pulses* (20 minutes, 3588290)

Thursday 08/26/2021

Surface Chemistry:

Virtual Room Zoom Room 27 (Oral - Virtual, COLL010D)

Steven Tait, Organizer, Indiana University; Lorena Tribe, Organizer, Presider, Penn State Berks

4:30 PM: **Uwe Burghaus** *Adsorption and reaction kinetics of SO₂ and H₂S on graphene/ruthenium(0001)* (20 minutes, 3582909)

4:50 PM: (withdrawn, 3584838)

5:10 PM: **Rong Ye** *Quantifying the adsorption affinity of capping agents on gold nanoparticles to guide shape-selective colloidal syntheses* (20 minutes, 3585162)

5:30 PM: **Fernando Galembeck** *Electric field effect on ice formation from vapor: new evidence for classical and non-classical nucleation* (20 minutes, 3591349)

5:50 PM: **Sang-Jin Ko** *Effect of imidazole as corrosion inhibitor on carbon steel weldment in district heating water* (20 minutes, 3587641)

6:10 PM: **Hongxia Hao** *What is happening in the microdroplet for reactive chemistry?* (20 minutes, 3593330)

Surface Chemistry:

Virtual Room Zoom Room 12 (Oral - Virtual, COLL010G)

Steven Tait, Organizer, Indiana University; Lorena Tribe, Organizer, Penn State Berks; Hongxia Hao, Presider, University of California Berkeley

7:00 PM: **Kenneth Judd** *Specific ion effects of alkali metal cations at a highly charged anionic interface* (20 minutes, 3584029)

7:20 PM: **Xiaochen Li** *Bioinspired surface free energy differentiation construction strategy for air-water/oil amphibious superhydrophilic-superoleophobic surface* (20 minutes, 3589394)

7:40 PM: **Muhammad Rabnawaz** *Advances in self-healing and self-cleaning materials* (20 minutes, 3589530)

8:00 PM: **Michele Baglioni** *Nanostructured fluids for polymeric coatings removal: The role of different surfactants in lowering the glass transition temperature* (20 minutes, 3596118)

8:20 PM: **Emine Sevgili Mercan** *Vapor deposition of thermally responsive poly(hydroxypropylmethacrylate-co-N-isopropylacrylamide) hydrogel thin films* (20 minutes, 3595973)

8:40 PM: **Aniruddha Deb** *Acoustic sinusoidal vibration-induced dewetting of thin polymer films: Faster kinetics, spontaneous self-organization, and adhesion induced instabilities* (20 minutes, 3584703)

ACS Colloid and Surface Chemistry Division (COLL)

Spring 2022 National Meeting, San Diego, March 20-24

List of Technical Symposia

Program chair: Steven Tait, tait@indiana.edu

Abstract Submission

Abstract submission closes on October 11, 2021

<http://maps.acs.org>

Symposia descriptions and abstract submission are available on the link above.

For questions about symposia, please contact the symposium organizers listed below:

ACS Award Lectures 2022

Steven L. Tait tait@indiana.edu

Colloidal Gels

Delia Milliron milliron@che.utexas.edu

Thomas Truskett truskett@che.utexas.edu

Ryan Jadrich rjadrich@lanl.gov

Biomembrane Synthesis, Structure, Mechanics, and Dynamics

Subra Muralidharan subra.murali@ucdavis.edu

Marjorie Longo mllongo@ucdavis.edu

Atul Parikh anparikh@ucdavis.edu

Mu-Ping Nieh mu-ping.nieh@uconn.edu

John Katsaras katsarasj@ornl.gov

Surface Science Young Investigators

Steven L. Tait tait@indiana.edu

Hans-Peter Steinrueck Hans-Peter.Steinrueck@fau.de

James Batteas batteas@chem.tamu.edu

ACS Award in Colloid Chemistry 2020 - Symposium in honor of Molly Stevens

Paul Weiss stm@ucla.edu

Nicholas Kotov kotov@umich.edu

Luis Liz-Marzan llizmarzan@cicbiomagune.es

ACS Award in Colloid Chemistry 2022 - Symposium in honor of 2022 ACS Awardee in Colloid Chemistry

TBD

ACS Award in Surface Chemistry 2022 - Symposium in honor of 2022 ACS Awardee in Surface Chemistry

TBD

Colloid, Nanomaterial, and Interface Chemistry Research at Primarily Undergraduate Institutions

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Basic Research in Colloids, Surfactants and Interfaces

Ramanathan Nagarajan Ramanathan.Nagarajan.Civ@mail.mil

Fundamental Research in Colloids, Surfaces and Nanomaterials

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Colloidal Nanoparticle Synthesis and Assembly

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Active and Responsive Interfaces

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Colloidal hybrid materials intended for biological applications

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Macromolecular Design of (bio) Energy Materials and Safety Evaluation

Sajid Bashir Liu br9@tamuk.edu
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Industry-Academia Dialogue

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Synthetic amphiphiles and formulations for the delivery of drugs, nucleic acids and proteins

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Frontiers and Challenges in Nanoparticle-Mediated Chemical Transformations

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Controlled assembly of charged soft matter

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Advanced Colloids Experiments (ACE) on the International Space Station

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Matthew Lynch lynch.ml@pg.com
Ron Sicker ronald.j.sicker@nasa.gov

Nanomaterials using colloidal synthesis for energy applications and catalysis

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PUNC: Nanomaterials Research at Primarily Undergraduate Institutions

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Experimental and Computational Methods for Predictive Self-Assembly

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Call for Symposium Proposals, Fall 2022 and Spring 2023

The Division of Colloid and Surface Chemistry is currently accepting symposium proposals for:

Fall 2022 National Meeting, Chicago, August 21-25

Spring 2023 National Meeting, Indianapolis, March 26-30

If you have an idea for a symposium or are interested in organizing a symposium, please contact the COLL program chair, Steven Tait, tait@indiana.edu. *Informal inquiries are welcome. It is often helpful to discuss preliminary ideas before formulating a formal proposal.*

Symposium proposals should include:

1. Title of the symposium
2. List of symposium organizers (names, affiliations, and email addresses). We recommend having 2-4 organizers.
3. One paragraph description of the symposium. This will eventually end up in the call for abstracts to advertise the symposium to attendees.
4. A list of potential invited speakers. This is not a final list and is only to gauge the scope of the symposium. Please consider including a diverse group of scientists in your symposium with regard to gender, ethnicity, region of the world, experiment/theory, academia/government/industry, and other considerations.

Please submit symposium proposals by November 1 for Fall meetings and by June 1 for Spring meetings to Steven Tait at tait@indiana.edu.