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## Message from the Division Chair

Welcome, to 2021. By all measures, it could not get here fast enough!

Thank you for the outstanding efforts and achievements of the Division during an extraordinarily-difficult year. I wanted to give a special shout-out to Kate Stebe (Past Chair), for her leadership through this period. The year ahead remains uncertain, but I maintain all the optimism that comes with a new year, buoyed by the outstanding talent and commitment of the Executive Committee and the vitality of the Division Membership.



As with past years, this spring holds a tremendous number of opportunities to build skills and connections, and to advance our community. Among these, the National Meeting is in April (<a href="https://www.acs.org/content/acs/en/meetings.html">https://www.acs.org/content/acs/en/meetings.html</a>) and CSS Symposium is in June (<a href="https://colloids2020.blogs.rice.edu/">https://colloids2020.blogs.rice.edu/</a>). In addition, I wanted to highlight several new opportunities debuting this spring.

Technology Award - Last year, the Division established the Technology Award. It is unique for the Division, as it recognizes research that has had a positive impact on society: "Special consideration will be given to the originality and creativity of the research leading to the process or product developed and to its impact on society". The Award provides a very real opportunity to recognize the outstanding contributions for all researchers in the chemical enterprises. Please consider applying on behalf of your deserving colleagues (<a href="https://www.colloidssurfaces.org/awards/">https://www.colloidssurfaces.org/awards/</a>).

Virtual Coffee - The Division continues to look for new opportunities to bring value to all our members. My inbox – as well as those of the entire Executive Committee, remain open to suggestions. It is my goal this year to hold regular 'virtual coffee' sessions for this purpose, particularly with members from industry and national laboratories.

Industry/Academic Dialogue - The Division continues to design programming to build bridges between the industrial and academic communities. To this end, the Division will sponsor the inaugural Industry/Academic Dialogue, focused on three topics: 1) Myths and Facts in Industrial R&D, 2) Industry Interests in R&D, and 3) What Drives a Successful Industrial Career? The Dialogue will be led by Gerard Baillely - Senior VP Corporate Research and Development at Procter and Gamble, with a distinguished panel from academe, industries, national laboratories and government. The session will be moderated by Professor Kate Stebe and myself. Students, Faculty and Industrial Researchers are all encouraged to attend, participate and contribute to the Dialogue. This Presidential Event will be held during the morning session at the Spring National Meeting on April 6<sup>th</sup>.

In closing, with the seemingly endless chaos in recent months, I am heartened that all of us have a unique opportunity to make a positive impact on the world. Thank you for being part of the COLL community so that all of us – working together, can make this happen through the transforming power of chemistry.

Best wishes and stay safe,

Matt Lynch, Division Chair

# Message from the Editor



Greetings, readers! it has been my pleasure to serve as the Editor of The Colloid and Surface Chemist newsletter for the past few years. It has been a wonderful opportunity for me to become more involved in the community. I am pleased to announce that starting with the Fall 2021 issue, Ajay Mallia will be serving as your new newsletter editor. As always, please send us emails with any announcements or pictures you'd like to seee in the newsletter. Happy 2021!

#### **Division Officers and Councilors**

Elected Officers

Chair: Matthew Lynch (lynch.ml@pg.com)
Chair Elect: James Batteas (batteas@chem.tamu.edu)

Vice Chair: Lauren Zarzar (ldz4@psu.edu)

Past Chair: Kathleen Stebe (kstebe@seas.upenn.edu)

Program Chair: Steven Tait (tait@indiana.edu)
Secretary: Marc Ilies (mailies@temple.edu)

Treasurer: Marina Ruths (marina\_ruths@uml.edu)
Membership Secretary: Rosa Espinosa-Marzal (rosae@illinois.edu)
Member-at-Large: Shelley Claridge (claridge@purdue.edu)

Member-at-Large: Rosalynn Quinones-Fernandez (quinonesr@marshall.edu)

Member-at-Large: Davita L. Watkins (dwatkins@olemiss.edu)
Councilors: Nicholas Abbott (nabbott@cornell.edu)
Jennifer Hollingsworth (jenn@lanl.gov)

Maria Santore (santore@mail.pse.umass.edu)

Alternate Councilors: Andrew Teplyakov (andrewt@udel.edu)

Ajay Mallia (amallia@ggc.edu)

Simona Murph (simona.murph@srnl.doe.gov)

**Appointed Officers** 

Chair, Awards Committee: Nicholas Abbott (nabbott@cornell.edu)

Unilever Award Committee Chair: Ponisseril Somasundaran (ps24@columbia.edu)

LaMer Award Committee Chair: Matthew Helgeson (helgeson@ucsb.edu)

Applied Materials & Interfaces Award Chair: Matthew Lynch (lynch.ml@pg.com)

ACS Fellows Nominations Chair Nicholas Abbott (nabbott@cornell.edu)

Maria Santore (santore@mail.pse.umass.edu)

Newsletter Editor: Lauren Zarzar (ldz4@psu.edu)

Regional Meetings Coordinator: Rosalynn Quinones-Fernandez (quinonesr@marshall.edu)

Summer Symposium Chair: Jim Schneider (schneider@cmu.edu)
Webmaster: Shelley Claridge (claridge@purdue.ed

Webmaster: Shelley Claridge (claridge@purdue.edu)
Student-Industry Symposium Chair: Nancy Falk (Nancy.Falk@clorox.com)

COLL-PUI Award and Relations Committee: Eric Borguet (eborguet@temple.edu)

Lorena Tribe (lut1@psu.edu)

# Free ACS Programs for Graduate Students and Postdocs

For information on opportunities for students and postdocs, including the ACS Preparing for Life After Graduate School Workshop <a href="www.acs.org/gradworkshop">www.acs.org/gradworkshop</a>, please contact GradEd@acs.org or visit <a href="www.acs.org/gradworkshop">www.acs.org/gradworkshop</a>, please contact Graduate <a href="www.acs.org/gradworkshop">www.acs.org/gradworkshop</a>, please <a href="www.

#### **COLL Division Promotional Video and Website**

The COLL Division promotional video is available. Please watch and share the video with your colleagues. <u>Watch now.</u>

We have recently launched a new COLL Division webpage. The new site will make it easier to access information you need about upcoming meetings, awards, and contacts for COLL division activities.

https://www.colloidssurfaces.org/



## Meet the New COLL Leadership



Dr. Ajay Mallia is an associate professor of chemistry at Georgia Gwinnett College, Lawrenceville, GA. His research interests include the design and studies of organic functional soft materials. Mallia is an active leader of the American Chemical Society at the national, divisional, regional, local levels and a certified facilitator of the ACS leadership development system. In recognition of providing significant research opportunities for undergraduate and HS students from underrepresented/economically disadvantaged backgrounds and his leadership at ACS, Mallia has been selected as a member of the Fellows of the ACS. For the contributions and service to ACS, he was awarded the national outreach volunteer of the year award (2020), E. Ann Nalley regional award

(2014), and outstanding local section outreach volunteer of the year award (2014).



Dr. Simona Hunyadi Murph is a Fellow Scientist at Savannah River National Laboratory (SRNL) and the Program Manager for SRNL's Laboratory Directed Research and Development (LDRD) Program. She is also a SGE with the U.S. Department of Energy (DOE) and an adjunct professor at the University of Georgia (UGA). Through her position at SRNL, Dr. Murph is "putting nanoscience to work" for national security missions, environmental stewardship implications, bio-medical studies, and fusion & clean energy applications. Over the years, she has been awarded over \$10 million in grants leading to pioneering nanotechnologies, 18 patents/invention disclosures, more

than 100 technical publications, and over 180 keynote/invited/contributed presentations. Throughout the years, she mentored and supported 48 graduate/undergraduate students and postdoctoral researchers.

By strengthening the engagements and interactions of the ACS Division of Colloid and Surface Science communities from national laboratories, academia, and industry, we can continue to explore uncharted territories in this exciting field. I will leverage my decades of expertise at the national, regional and local levels to engage and support our scientific community to innovate and develop transformational technologies.



A native of Memphis, Tennessee, Davita L. Watkins obtained her B.S. in Chemistry and Anthropology from Vanderbilt University in Nashville, Tennessee. After working briefly for a bioanalytical company, she received a Ph.D. in Chemistry from the University of Memphis under the tutelage of Dr. Tomoko Fujiwara. As a doctoral candidate, she developed and established multi-step synthetic methods for a series of stimuli-responsive materials. In 2012, she accepted a postdoctoral position at the University of Florida in Gainesville, Florida, with Dr. Ronald K. Castellano where she developed novel self-assembling organic materials for photovoltaic applications. In 2014, she began her independent academic career at the University of Mississippi,

focusing on design guidelines towards functional materials with tunable properties through molecular self-assembly. Her research strategies have afforded nanoparticles and nanostructured materials with applications ranging from energy storage devices to diagnostic agents. Vision for COLL: Acknowledging the vital role that ACS as played in my growth as a scientist, it is my vision as Member-at-Large in the Division of Colloids and Surface Chemistry to take this opportunity to honor the core values of the organization by promoting diversity and nurturing strong connections in STEM. As one of the most multifaceted divisions under ACS, I hope to act as a representative and liaison for the division, engaging individuals from various disciplines. I look forward to strengthening the division

and working hard to help catalyze innovation, stimulate long-lasting relationships between industry, government and academia, and promote new avenues in scientific literacy for the broader community.

# Highlights from the 2020 Fall National ACS Meeting

COLL programming for the 2020 Fall ACS National Meeting (originally scheduled to take place in San Francisco, CA) had two independent components that were complementary and not conflicting in schedule. One component of the meeting was the ACS Virtual program organized by ACS for all Divisions. Those who participated in this program submitted pre-recorded presentations to ACS. Eight Broadcast sessions for COLL were organized with a total of 30 papers presented. One Broadcast session featured the two Langmuir lecturers, Kristen Fichthorn and Emmanuel Delamarche. The remaining seven Broadcast sessions were devoted to the following symposia:

- The Wide World of Adhesion. Symposium in Honor of Kash Mittal at 75
- Frontiers and Challenges in Nanoparticle-Mediated Chemical Transformations
- Applications of Colloids in Biology/Medicine
- Bottom-up Development of Formulations for Delivery of Nucleic Acids and Proteins
- Hydrodynamics and Thermodynamics at Interface
- Nanomaterials
- Surface Chemistry

The other component of the meeting was the COLL synchronous, virtual program with LiveStreaming, organized by the COLL Division. Oral and poster sessions were organized involving real time presentations on the ZOOM platform. A total of 20 oral sessions were held covering all the topical symposia, with a total of 157 presentations. In addition, 17 posters were presented. COLL also organized an oral session to enable poster presenters to make brief oral pitches of their work. 11 poster presenters participated in this.. <a href="https://www.colloidssurfaces.org/conferences/">https://www.colloidssurfaces.org/conferences/</a>

#### **COLL Award Lectures**

The COLL division is active in selecting recipients for major awards that are sponsored by the journals Langmuir (2 awards) and ACS Applied Materials and Interfaces. In each case, the recipient is selected by a committee that includes representatives from the COLL Division and the respective journal and the recipient presents an invited talk at the Fall National ACS Meeting.

# Langmuir Lectures



#### Kristen Fichthorn

Langmuir and the ACS Division of Colloid & Surface Chemistry were proud to honor Kristen Fichthorn (Department of Chemical Engineering and Physics, Penn State University) in the Langmuir Lectureship award series. Prof. Fichthorn delivered a seminar titled, "Surface science of shape-selective metal nanocrystal synthesis from first-principles". Dr. Fichthorn is being recognized for her pioneering work in understanding the synthesis of metal nanocrystals and crystalline particles of metallic materials, using theory and computer simulations. Dr. Fichthorn's research primarily in multi-scale materials simulation, in which she develops and applies theoretical techniques ranging

from quantum density functional theory to molecular dynamics, Monte Carlo methods, and continuum theories to a diverse array of fundamental problems involving fluid-solid interfaces. Applications lie in nanoscale materials, thin-film and crystal growth, colloidal assembly, and wetting.



#### **Emmanuel Delamarche**

Langmuir and the ACS Division of Colloid & Surface Chemistry were proud to honor Emmanuel Delamarche (IBM Research – Zurich) in the Langmuir Lectureship award series. Dr. Delamarche delivered a seminar titled, "Long journey to "biopatterning": surface assays and analysis using closed- and open-space microfluidics". Dr. Delamarche is being recognized for his influential work in microtechnology, surface chemistry, and biochemistry and for solving important problems in biology and medicine. His current projects deal with investigating intercellular pathways relevant to neurodegenerative

diseases, developing new techniques for tissue section analysis, and microfluidics for point-of-care testing diagnostics. His expertise covers self-assembly, soft lithography, miniaturized biological assays based on microfluidics, and nanotechnology in general.

## **Upcoming Events and Deadlines**

## ACS National Meeting & Exposition, April 5-16, 2021, Virtual

ACS Meeting Theme: Macromolecular Chemistry: The Second Century. Acceptance notices will be sent by March 10 and first scheduling notices will be sent by March 19. Meeting dates exclude the weekends. Registration opens mid-January. Technical symposia will include:



Self-assembly in Polymer Systems

Biomembrane Synthesis, Structure, Mechanics, and Dynamics

Colloidal Nanoparticle Synthesis and Assembly

Colloidal Hybrid Materials Intended for Biological Applications

Macromolecular Design of (bio) Energy Materials and Safety Evaluation

Semiconductor Surfaces: from Chemistry and Function to Applications

Industry-Academia Dialogue

Nanomaterials

Surface Chemistry

Biomaterials and Biointerfaces

Basic Research in Colloids, Surfactants and Interfaces

ACS Award Lectures 2020

**ACS Award Lectures 2021** 

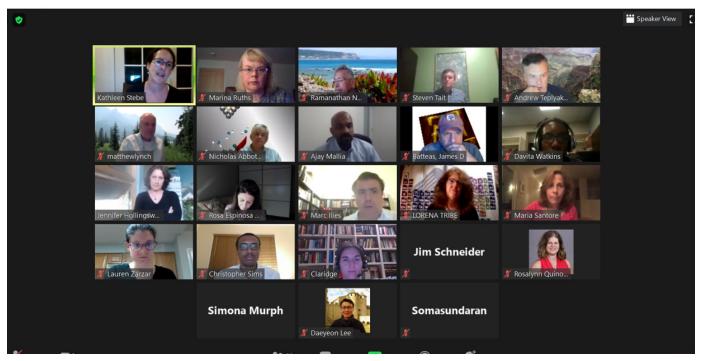
ACS Award in Surface Chemistry 2020 - Symposium in honor of Teri Odom

ACS Award for Research at an Undergraduate Institution 2020 - Symposium in honor of Kerry Karukstis

ACS Award in Colloid Chemistry 2021 - Symposium in honor of Emily Weiss

ACS Award in Surface Chemistry 2021 - Symposium in honor of Vicki Grassian

Fundamental Research in Colloids, Surfaces and Nanomaterials



The fall Executive Committee meeting was held virtually over Zoom. Many exciting new initiatives, events, and awards were planned for this coming year.

#### **Colloid & Surface Science Symposium**



The ACS Colloid & Surface Science Symposium continues the long-standing tradition of bringing together interdisciplinary researchers from academia and industry across the globe. They convene to celebrate their common interest in particles and complex fluids, interfacial phenomena and chemistry, soft-matter science, and environmental

science. Organization of the 2021 ACS CSSS is underway, so please watch for announcements of times, locations, and details at https://www.colloidssurfaces.org/conferences/.

# Unilever Award for Outstanding Young Investigator in Colloid & Surfactant Science (Deadline February 1, 2021)

<u>Purpose</u>: To recognize and encourage fundamental work in colloid and/or surfactant science carried out in North America by researchers in the early stages of their careers.

<u>Award</u>: The award consists of \$3,000 and a plaque. Up to \$2,000 for travel expenses to the meeting at which the award is presented will be reimbursed.

<u>Eligibility</u>: Nominees who are within seven (7) years of receiving their Ph.D. will be eligible for the Award. The cut off date for eligibility this year will be July 1, 2014. Special consideration is given to the originality and creativity of the work and to its potential impact. The research must have been carried out in North America.

Establishment and Support: The award was established in 2003 by the Unilever Corporation.

<u>Link</u>: for additional information, including submission process, see <a href="https://www.colloidssurfaces.org/awards/">https://www.colloidssurfaces.org/awards/</a>

# Langmuir Lectureship Awards (Deadline April 1, 2021 \*\*note new deadline\*\*)

Please note that the due date for receipt of nominations has been changed to April 1, 2021 to enable inclusion of the awardees abstracts in the program of the 2021 Fall ACS meeting.

<u>Purpose</u>: The Langmuir Lectureship recognizes two individuals working in the interdisciplinary field of colloid and surface chemistry. The winners will give the lectures at a dedicated symposium at the 2021 ACS Fall National Meeting

<u>Award</u>: The award consists of \$3,000 and a plaque. In addition, up to a total of \$1500 will be provided towards travel expenses to attend the 2021 ACS Fall National Meeting at which the award lectures will be presented.

<u>Eligibility</u>: Researchers in industry, government laboratories or academia are eligible to apply. Special consideration will be given to the impact of the individual's research accomplishments and the nominee's ability to give a dynamic lecture to a broad audience.

<u>Establishment and Support:</u> The award was established in 1979 by the ACS Division of Colloid and Surface Chemistry (COLL), and the award is currently co-sponsored by COLL and Langmuir.

Link: for additional information, including submission process, see <a href="https://www.colloidssurfaces.org/awards/">https://www.colloidssurfaces.org/awards/</a>

#### **2021ACS Fellows Nominations**

Deadline in spring, still to be announced. Nominations for the ACS fellowship by COLL division members should be submitted directly to the ACS at <a href="https://www.acs.org/content/acs/en/funding-and-awards/fellows.html">https://www.acs.org/content/acs/en/funding-and-awards/fellows.html</a>.

# Colloid and Surface Technology Award (Deadline, February 1, 2021) \*NEW\*

<u>Purpose</u>: To recognize and encourage applied and translational work in colloid and surface science by individuals or small teams of researchers (typically 2-4) in industry, government laboratories or academia.

Award: The award consists of \$3,000 and a plaque. In addition, up to a total of \$1000 will be provided towards

travel expenses for one or more speakers to attend the meeting at which the award will be presented. The winner or winning team is expected to deliver a lecture at the fall ACS national meeting.

<u>Eligibility</u>: Researchers in industry, government laboratories or academia are eligible to apply. Special consideration will be given to the originality and creativity of the research leading to the process or product developed and to its impact on society.

<u>Establishment and Support:</u> The award was established in 2020 by the ACS Division of Colloid and Surface Chemistry.

<u>Link</u>: for additional information, including submission process, see <a href="https://www.colloidssurfaces.org/awards/">https://www.colloidssurfaces.org/awards/</a>

#### 2021 ACS Colloid and Surface Science Travel Awards \*NEW\*

Once ACS in-person events resume, COLL will award several travel grants of up to \$500 per PhD graduate student or postdoctoral researcher as the first author of contributed oral presentations in sessions sponsored by COLL at ACS Spring or Fall National Meeting. Applicants will be chosen on the basis of the quality of their work as evidenced by the abstract of the paper, a letter of support from their academic advisor and the travel distance. Applicants must be PhD students or postdocs at the time of the National Meeting. Applications from individuals from groups underrepresented in STEM fields are particularly encouraged. Both student/postdoc and advisor, domestic or foreign, must be members of COLL, not just of ACS. A student may only receive COLL Travel Award once during their PhD and postdoc. Decisions for the awards will be sent by email to the applicants before the ACS National Meetings with instructions on how to receive reimbursement checks.

## **Volunteer to Organize a Symposium for COLL!**

If you want to organize a symposium for the Spring meeting, a proposal must be sent by June 1<sup>st</sup> of the previous year. If you want to organize a symposium for the Fall meeting, proposal must be sent by November 1<sup>st</sup> of the previous year. Proposals are being accepted for the following ACS National Meetings now:

National Meeting & Exposition Theme: Bonding through chemistry March 20 - 24, 2022

San Diego, CA

National Meeting & Exposition Theme: Sustainability in a changing world August 21-25, 2022 Chicago, IL National Meeting & Exposition Theme: Crossroads of chemistry

March 26 - 30, 2023 Indianapolis, IN

National Meeting & Exposition
Theme: Harnessing the power of data
August 13, 17, 2023

August 13-17, 2023 San Francisco, CA

If you want to organize a symposium, please e-mail a proposal to the COLL Program Chair who will act quickly to decide on the suitability of the symposium and the best meeting to schedule it. Contact: Steven Tait (tait@indiana.edu)

**Regional Meetings.** In the past, the Division of Colloid and Surface Chemistry has provided financial support for COLL-related programming in several ACS Regional Meetings. The Division provides up to \$500 per symposium, with a maximum of two symposia per regional meeting, for programming that is consistent with the scientific mission of the Division with the stipulation that COLL funding must be acknowledged in the meeting program. Interested organizers of relevant symposia at future regional meetings should contact the division's regional meetings liaison, Prof. Rosalynn Quinones (quinonesr@marshall.edu) to request COLL support. All requests should identify the regional meeting, with dates and location, along with the symposium or symposia titles, a list of topics to be included, names of speakers (if known) and a statement of how Division funds will be used.

## A Message from our Membership Secretary

Encourage your colleagues and coauthors to become members of the Division of Colloid and Surface Chemistry (COLL)! COLL is one of the most active Divisions in the American Chemical Society with approximately 2400 members throughout the world. Scientists like yourself join the Division to benefit professionally from the exchange of scientific information between its members. Attendance and presentations at the Division's conference symposia provide excellent opportunities for professional networking and for enhanced visibility of your research. Every year, nearly 2000 research presentations are made in the COLL Division at the two ACS National Meetings and the unique summer symposium of the COLL Division. As a Division member, you can also volunteer to organize a thematic technical symposium on a topic of your interest



at the ACS National Meetings. To learn more about our activities, fellowships, and awards, visit our webpage at colloidssurfaces.org/

To join the Division, go to <a href="http://www.acs.org/content/acs/en.html">http://www.acs.org/content/acs/en.html</a>. If you are not an ACS member, first join the ACS. If you are an ACS member, log in and then select "Membership & Networks", "Technical Divisions" and "Join a Division". On the application form, fill in the code 509 for the COLL division. The Division Membership Fees are: \$15 (ACS member), \$16 (ACS non-member, COLL affiliate), or \$5 (ACS student member).

Sincerely, Rosa Espinosa-Marzal Membership Secretary of the ACS COLL Division

## **ACS Innovation Hub LinkedIn Group**

The ACS Technical Division leaders would to invite entrepreneurially-minded COLL members to the new Innovation Hub LinkedIn group, where those interested in entrepreneurship in the chemical industry can make important connections, get advice, and learn about the latest trends driving chemical industry innovation. The group has already gained more than 350 members since its launch in early July, and we're sharing valuable content and fostering collaborative conversation every day. With your help, the group will continue to grow and be a valuable incubator for entrepreneurship and innovation in the chemical space. <a href="https://www.linkedin.com/groups/12269166/">https://www.linkedin.com/groups/12269166/</a>

