

JANUARY 2024 NEWSLETTER

A MESSAGE TO THE COMMUNITY

Dear NanoBioNYC community,

We hope your 2024 is off to a positive and prosperous start! As we usher in a new semester, we are excited for the engaging new programming and collaboration opportunities ahead this Spring and beyond. While January may have seen a quiet start for NanoBioNYC, this newsletter also features highlights from our Fall 2023 programming that ended the year on a high note.

We'd like to take a moment to thank everyone who actively participates in our events and activities and engages with this dynamic community, making it a welcoming environment of interdisciplinary collaboration for students and faculty alike. We appreciate your participation and encourage you all to continue sharing your ideas and helping us shape our journey as we learn and grow together.

- Tasnim Jackson, Program Coordinator

SPRING COURSE HIGHLIGHT: STUDENTS DEEPEN RESEARCH WITH HANDS-ON LAB TRAINING

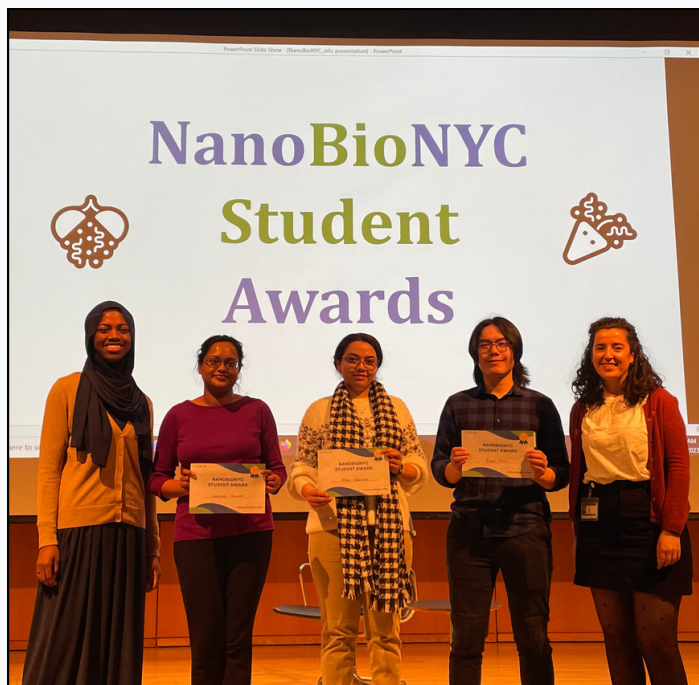


A new year, a new cohort of students in our Laboratory Techniques for Research in Nanotechnology course led by Dr. Rein Ulijn and facilitated by Dr. Xi Chen, Dr. Samantha Roberts, Dr. Tai-De Li, Dr. Tong Wang, Dr. Maya Narayanan Nair, and new addition to the course this year, Dr. Ye He. This course provides students hands-on training at the ASRC's core facilities in nanofabrication, surface science, and imaging techniques. This semester, nine of our students are current NanoBioNYC Fall Fellows in the Chemistry, Biochemistry, and Physics programs working directly with facility directors and developing practical research skills.

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FALL 2023 STUDENT AWARD COMPETITION



We are thrilled to announce the winners of the Fall 2023 NanoBioNYC student awards, recognizing exceptional talent and dedication in the field of bio-inspired nanoscience! These awards not only celebrate individual student achievements but also showcase the remarkable potential of our diverse traineeship program.

Congratulations to our Fall 2023 award winners!

- * **Ryan Kwok** in Computational Research for his work titled Mechanochemistry: A Sustainable Application.
- * **Dharshika Malwane** in the Nanoscale Solutions for Sustainable Materials category for her work titled Designed Elastins as Future Refrigerants.
- * **Atena Farahpour** in Biomedical Materials category for her work titled Cancer Drug Delivery.

[Watch the winning videos here!](#)



CONFERENCE HIGHLIGHT: NSF NRT ANNUAL MEETING

In October 2023, the National Science Foundation's Annual NRT Meeting, hosted by Arizona State University in Tempe, AZ, brought together dozens of NRT programs from across the country. NanoBioNYC was well-represented, with Prof. Rein Ulijn (PI), Prof. Stephen O'Brien (co-PI), and Tasnim Jackson (Program Coordinator) attending in person. Our team actively participated in discussions on best practices and enhancing scholarly impacts of the NRT programs, including one on goals and challenges co-paned by Prof. Ulijn, networked with potential collaborators, and presented a poster titled "What is NanoBioNYC?," showcasing our program's innovative research and student development initiatives.



[View our program poster here!](#)



COMPUTATIONAL WORKSHOP HIGHLIGHT



Our Computational Workshop brought students together at the College of Staten Island for an exciting day of coding in Python led by Professors Sharon Loverde and Mateusz Marianski and an illuminating tour of the High Performance Computing Center with Director Alex Tzanov.



Special thanks to students Augustine Onyema and Tania Rajpersaud for their help facilitating this workshop.

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More Workshop Highlights!



PITCH YOUR SCIENCE WITH SHAWN RHEA (VIRTUAL)

Huge thank you to Shawn Rhea, Science Media Director at the Graduate Center, for educating us on the principles of science communication and presenting one's research to a non-expert audience by breaking down jargon and using engaging analogies.



MONTHLY ALUMNI CAREER CHATS (VIRTUAL)



We were excited to welcome back two GC alumni for our very first Alumni Career Chat. Thank you to Drs. Roxy Piotrowska and Francesco Lavini for sharing their journeys as CUNY graduate students and their paths to their current esteemed positions, providing our students an exciting glimpse into the world beyond academia.

Alumni Chats continued in January 2024 with guest speakers Dr. Silvio Panettieri and Dr. Nasim Farahmand.

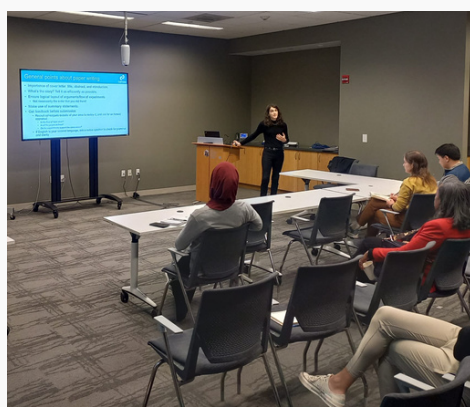


DISCOVERING YOUR CAREER STRENGTHS WITH CP&PD

Continuing the conversation of life after graduate school, thank you to the Career Planning & Professional Development (CP&PD) staff Jennifer Furlong, Emily Seamone, and Rebecca Schramm for leading our Discover Your Career Strengths workshop and holding one-on-one sessions with students, providing guidance on identifying strengths, maximizing potential, and integrating them into various career paths. From this visit spawned CP&PD's upcoming monthly "Ask Me Anything" sessions hosted in person at the ASRC starting this Spring semester. Be on the lookout for future sessions!



MEET THE EDITOR WITH GILLIAN HATZIS FROM CHEM



It was a great pleasure to have Dr. Gillian Hatzis, Associate Scientific Editor from *Chem* by Cell Press, visit the ASRC and lead an informative and engaging workshop on peer-reviewed scientific publishing. This discussion illustrated the path from manuscript draft to peer-reviewed publication, delivered practical insights into navigating the publishing ecosystem, and offered ways to optimize one's collaboration with editors and reviewers.

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POLYMER CHEMISTS OUTSIDE OF ACADEMIA (VIRTUAL)

Thank you again to Prof. Sharon Loverde for facilitating discussions with Dr. Michelle Seitz, AAAS Science and Technology Policy Fellow, who explored a case study on the morphology of silicone hydrogels and Dr. Ashish Punia, Principal Scientist of Materials & Biophysical Characterization at Merck, who discussed polymeric amorphous solid dispersions in pharmaceutical drug product development.



STAGED READING EVENT: DELICATE PARTICLE LOGIC



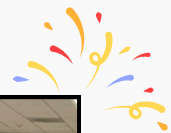
Another successful staged reading by Break-A-Leg Productions and in collaboration with CCNY G-RISE, CUNY MMA, and RaMP Postbaccalaureate programs, Delicate Particle Logic delivered a thought-provoking performance and Q&A discussion that shined a light on the life and experiences of Lise Meitner, a woman whose contributions to our understanding of nuclear fission were unjustly overlooked, inspiring conversation around gender bias in the scientific community.



Dissertation Defenses



Huge congratulations to Chemistry students of Prof. Rein Ulijn and NanoBioNYC Spring Scholars Dhwani Dave and Fahmeed Sheehan for successfully defending their dissertations last semester! Dhwani will be starting his postdoctoral research with Prof. Sam Stupp at Northwestern University, and Sheehan is currently seeking an academic position with a significant teaching component. We are incredibly proud of all they have accomplished and wish them the best of luck on their journeys.



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Publications

Authors	Titles	Links
Kenny Barriales , Salma Kassem, Deborah Sementa, Alfredo Vidal Ceballos, Tong Wang, Shadman Khandaker, Rinat R Abzalimov, Ankit Jain, Shana Elbaum-Garfinkle , Rein V. Ulijn	Localized and regulated peptide pigment formation inside liquid droplets through confined enzymatic oxidation <i>Chem. Commun.</i> , 2023	Link
Bhavesh Deore, Ryan W. Kwok , Malika Toregeldiyeva, Jesus T. Vázquez, Mateusz Marianski , and Carlos A. Sanhueza	Conformational Properties of Aryl S-Glucosides in Solution <i>J. Org. Chem.</i> , 2023, 88, 22, 15569–15579	Link
Deborah Sementa, Dhwanit Dave , Rachel Fisher, Tong Wang, Shana Elbaum-Garfinkle , Rein V. Ulijn	Sequence-Tunable Phase Behavior and Intrinsic Fluorescence in Dynamically Interacting Peptides <i>Angewandte Chemie</i> , e202311479	Link
Jiye Son , Sadiyah Parveen, Douglas MacPherson, Yaron Marciano, Richard H Huang, Rein V. Ulijn	MMP-responsive nanomaterials <i>Biomater. Sci.</i> , 2023, 11, 6457-6479	Link
Antonio R Cerullo, Maxwell B McDermott, Lauren E Pepi, Zhi-Lun Liu, Diariou Barry, Sheng Zhang, Xu Yang, Xi Chen , Parastoo Azadi, Mandë Holford , Adam Braunschweig	Comparative mucomic analysis of three functionally distinct Cornu aspersum Secretions <i>Nat. Commun.</i> , 2023, 14, 5361	Link

If you are a NanoBioNYC Fall Fellow or Spring Scholar, or you are a CUNY faculty mentor to a Fellow or Scholar, we want to celebrate your successes! Let us know of any recent publications so we may highlight it in our next newsletter.

Click here to report your achievements!

ALFRED P. SLOAN FOUNDATION GRANT HIGHLIGHT

Last but not least, major congratulations to NanoBioNYC Director [Rein Ulijn](#) and his research team who received a \$675,000 grant from the Alfred P. Sloan Foundation to investigate the question of whether molecular communities can learn.



Read more here!

STAY TUNED FOR OUR SECOND ANNUAL
NANOBIONYC SYMPOSIUM LATER THIS
SPRING SEMESTER!