



Chair's Welcome

It was wonderful to see so many of you at the 2023 APS March Meeting in Las Vegas, which felt like a welcome return to almost normal. I would especially like to thank the 2023 Program Chair Julie Albert, Program Vice-Chair Bryan Boudouris, and DPOLY Past Chair Mahesh Mahanthappa for all of their efforts putting together an outstanding program. I also want to thank recently departed DPOLY Executive Committee members Ramanan Krishnamoorti, Zahra Fakhraai, and Whitney Loo for their service to the community.

Planning for the 2024 March Meeting is well underway! While the deadline for Focus Sessions and Invited Sessions has already past, please reach out to Program Chair Bryan Boudouris if you would like to help out with sorting, chairing a session, and/or serving as a judge for the poster session. Planning for the 2024 DPOLY Short Course on “Polymer Physics of Additive Manufacturing” is also ongoing; this is shaping up to be a very interesting short course that we expect to appeal to many members of DPOLY as well as other units. I hope to see you all in Minneapolis next March!

DPOLY's ability to provide a rich and vibrant community, organize top-notch programming, provide recognition to leaders in our field, and support our collective efforts to improve diversity and inclusion all depend critically on maintaining a broad and diverse membership. Please be sure to renew your membership in DPOLY, and please consider signing up for a lifetime membership (see details below)—it is a great deal financially, especially for early- and mid-career researchers, and means one less thing to take care of each year. Please also encourage your colleagues, friends, collaborators, and students who might not already be members to join as well.

This newsletter includes histories of the Polymer Physics Prize, Dillon Medal, and Frank J. Padden, Jr. Award compiled by Mahesh Mahanthappa.

Sincerely,

Ryan Hayward
2024 DPOLY Chair

LOOKING AHEAD: 2024 DPOLY March Meeting Program

We are pleased to be helping the community bring together an exciting program for the APS March Meeting 2024 to be held in beautiful Minneapolis, MN on March 4 – 8, 2024. As always, we are working closely with APS staff to ensure that the timeslots for sessions and the sizes of rooms associated with DPOLY sessions are appropriate.

We owe a big thank you to many folks from across the community who aided in developing key Invited and Focus Sessions for DPOLY. Many people worked hard to collaborate such that robust and intriguing sessions were created. Those sessions are currently being reviewed by the APS staff, and we will update the community as appropriate.

There are still spots open to chair our Standard Sorting Category sessions, and we would very much appreciate volunteers for these roles. A list of these Standard Sorting Category sessions can be found at this link, where a Standard Sorting Category is any session that does not have “Focus” or “Invited” listed next to the session name.

<https://meetings.aps.org/Meeting/MAR23/SessionIndex2?SponsorID=DPOLY#all>

If you would like to chair one of these sessions, or if you have any comments or concerns, please do not hesitate to email Bryan Boudouris (boudouris@purdue.edu) and Lisa Hall (hall.1004@osu.edu) with the 2024 DPOLY Programming Committee. We look forward to hearing from many of you.

Thank you very much for all you have done and your continued willingness to make the DPOLY Program at the 2024 March Meeting a huge success.

2024 Padden Award Nominations

A major highlight of each APS MM is the Frank J. Padden, Jr. Award Session, which features exciting research presentations by graduate student members of DPOLY. Nominations for the Frank J. Padden Hr. Award given at the 2024 APS March Meeting are due to Prof. Moon Jeong Park (moonpark@postech.ac.kr) by the closing date for the March Meeting abstract submission.

Complete Padden Award nomination packages will include: (1) a 2-page CV of the nominee, (2) a nominating letter addressing the quality of graduate research and academic excellence of the nominee, and (3) a copy of an acceptable abstract for a contributed talk in the DPOLY March Meeting Program.

We strongly encourage you to plan ahead and to nominate a diverse set of candidates that reflects the early career membership of our lively division.

For further details visit: <https://engage.aps.org/dpoly/honors/prizes-awards/frank-padden-award>

We are grateful to the University of Akron for sponsoring the finalists' dinner and look forward to the 2024 Padden Award Session!

2024 DPOLY Short Course: “*Polymer Physics of Additive Manufacturing*”

The 2024 DPOLY Short Course on “*Polymer Physics of Additive Manufacturing*” is being planned by Moon Park (moonpark@postech.ac.kr), Jonathan Seppala (jonathan.seppala@nist.gov), Peter Olmsted (peter.olmsted@georgetown.edu), Emily Davidson (edavidson@princeton.edu), and Leanne Friedrich (leanne.friedrich@nist.gov). Topics will likely include thermoplastic extrusion, volumetric 3D printing, direct write printing, powder bed fusion and fused deposition modeling, bioprinting/embedded direct write printing, stereolithography, and digital light processing. The focus will be on developing measurement techniques, modeling, and non-equilibrium processing methods to manufacture polymer additives at the industrial scale. Feel free to reach out to them if you are interested in contributing to the course.

2023 Virtual Polymer Physics Symposium

Join us for the 3rd installment of the **Virtual Polymer Physics Symposium (VPPS)**, taking place on August 7th - 8th, 2023 on the virtual platform Spatial Chat! Organized by Early Career Researchers in Polymer Physics and sponsored by DPOLY, this event is a must-attend for anyone interested in the latest advancements in polymer physics.

With priority given to outstanding submissions from first time presenters or ECRs who couldn't attend APS March 2023 meeting due to visa/funding constraints, the symposium will feature four technical sessions with talks from graduate students and postdocs on topics of broad interest in polymer science. Plus, there's a table-of-contents-style poster competition, a DEI panel, networking sessions and a career panel with a mixture of scientists from Industry, Academia, and Government.

Abstract submissions on polymer science topics by grads/postdocs can be made by following this link <https://form.jotform.com/231314009379150> by **July 15th**. Don't miss this opportunity to share your work and connect with fellow researchers with the added bonus of awards for the poster competition!

Submit your talk and/or poster abstract and mark your calendar for August 7th - 8th, 2023. We look forward to seeing you at the Virtual Polymer Physics Symposium!

Organized by Early Career Researchers in Polymer Physics: Liliana Bello Fernandez, Divya Iyer, Pierre Kawak, Anastasia Neuman, Bharath Venkatesh, Kathryn Wilcox

THE YEAR IN REVIEW: 2023 Hybrid March Meeting

We had a busy March meeting, with 64 DPOLY-led sessions, including 40 DPOLY focus sessions, and a total of 746 DPOLY abstracts. Many thanks to 2023 DPOLY Program Chair Julie Albert and Program Vice-Chair Bryan Boudouris for putting together an outstanding DPOLY meeting schedule. Thanks also to our hard-working session chairs and organizers, and to all our speakers who helped make the meeting a success.

Congratulations again to our 2023 DPOLY Prize Winners:

2023 Polymer Physics Prize: Jian Ping Gong, Hokkaido University

2023 John H. Dillon Medal: Vivek Sharma, University of Illinois at Chicago

2023 UKPPG/DPOLY Lecture Exchange: Michelle A. Calabrese, University Minnesota

2023 Frank J. Padden, Jr. Award: Pamela Cai, Stanford University

This year we had 126 combined in person and virtual DPOLY posters. We thank Prof. Bryan Boudouris for organizing the poster session and competition and all of the volunteer judges who viewed the posters and interacted with the presenters. We are also grateful to the *Journal of Polymer Science* (Wiley) for sponsoring the Poster Prizes this year, which were awarded to:

Award Recipients

2nd Runner Up: Alana Gudinas, Stanford University

1st Runner Up: Hyunki Yeo, Purdue University

Top Awardee: Callie Zheng, Princeton University

Congratulations to all!

2023 Short Course Summary: “*The Polymer Physics of Separation Membranes*”

Thank you very much for attending the 2023 APS DPOLY Short Course entitled "Polymer Physics of Separation Membranes" on March 4-5, 2023, in Las Vegas. We were excited to see 54 in-person participants with 9 invited speakers. We awarded 22 graduate student travel scholarships thanks to the support from the NSF.

APS March Meeting

DPOLY Short Course: Polymer Physics of Separation Membranes

March 4-5, 2022: in-person (Las Vegas)

APS Division of Polymer Physics DPOLY

• Characterization & Control of: Morphology Chemistry Address Challenges in Separations

• 54 in-person participants

• 11 speakers & organizers

• 20 graduate student travel scholarships

Thank you to our sponsors!

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We would like to thank our generous sponsors for their kind sponsorship: NSF, Physical Review Materials, University of Notre Dame Department of Chemical and Biomolecular Engineering, Penn State University Department of Chemical Engineering, University of Pennsylvania Department of Chemical and Biomolecular Engineering, University of Notre Dame Materials Science and Engineering Program, ACS Macro Letters and Macromolecules, and Air Products.

We hope to continue the efforts for bridging polymer physics and membrane science. Please consider submitting your abstracts to "Transport Phenomena in Membranes for Separations" in coming APS March meetings.

Bill Phillip and Hee Jeung Oh, 2023 APS DPOLY Short Course Organizers

Background and Brief History of some of our prizes and awards

APS Polymer Physics Prize: This prize was established in 1963. The Prize was supported through generous sponsorship of the Ford Motor Company and Ford Foundation through a series of termed agreements from 1963–2003. In 2004, the Prize was solely supported by DPOLY operating funds. From 2005–2009, the Polymer Physics Prize was sponsored by GE Global Research. From 2008–2010, Emeritus Professor and past Prize winner [Hyuk Yu](#) (Univ. of Wisconsin) led a major effort to endow the Prize in perpetuity. Leveraging the generous support of a number of past Polymer Physics Prize winners (15.1%) against donations from the Dow Chemical Company (52.9%), DPOLY Operating Funds (8.7%), and LG Chemical (3.8%), the Prize was endowed in 2010. The APS subsequently contributed funds to further secure the endowment in 2018 (23.8%).

John H. Dillon Medal: The medal was established in 1983 by The American Physical Society and the Division of Polymer Physics (DPOLY) to honor the legacy of [John H. Dillon](#) in the year after he passed. Dillon (Ph.D. Physics, University of Wisconsin–Madison, 1931) joined the research group at Firestone Tire and Rubber Company, where he remained until 1946. During his career at Firestone, he was involved in aspects of the Manhattan Project and U.S. Government synthetic rubber program. Notably, Dillon helped to found [APS DPOLY in 1944](#) (then known as the Division of High Polymer Physics, DHPP) as the second oldest division in the APS. And, Dillon served as the first APS DPOLY Division Chair. As an active member in DPOLY and in the Society of Rheology, Dillon's research spanned aspects of polymer rheology, morphology, and mechanical properties.

Beginning in 1997, sponsorship of the medal was assumed by [Elsevier](#), Oxford, UK., publishers of the journal, [Polymer](#).

Frank J. Padden, Jr. Award: This award is named for [Frank J. Padden, Jr. \(1928–2002\)](#), who was a distinguished polymer physics researcher and an active member of the APS DPOLY (formerly known as the Division of High Polymer Physics, DHPP). Padden (Ph.D., Mellon Institute of Industrial Research) spent a majority of his scientific career working with his close collaborator H. D. Keith at Bell Telephone Laboratories (Murray Hill, NJ). [For their seminal work on the crystallization processes that underpin the key properties of commodity polymers such as polyethylene, polypropylene, and nylons](#), Keith and Padden were jointly awarded

the [APS Polymer Physics Prize in 1973](#). Padden served as the Secretary-Treasurer of DPOLY for 21 years (1967–88), during which time he helped to strengthen and broaden the scope of its activities. In recognition of his caring mentorship of young scientists, DPOLY established this award in his honor to recognize a graduate student for excellence in polymer physics research.

Since 1997, the University of Akron College of Polymer Science and Engineering has co-sponsored this award with DPOLY.

Lifetime Membership!

DPOLY members may consider joining APS as a lifetime member at 15 x the current APS rate. More details may be found here:

<https://www.aps.org/membership/life.cfm>

Many early and mid-career DPOLY members enjoyed this selection and did not have to deal with increasing membership dues and yearly reminders. Some of us wish we knew about it earlier. Here's your chance!

Best regards,
The DPOLY Executive Committee