

COMMENT

Comment: Engaging and empowering graduate students and postdoctoral scholars

By Carmen Gauthier, chair, ACS Society Committee on Education
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Photo by Thomas Gauthier

Anniversaries are times to celebrate and reflect on where we've been and where we are going. A decade ago, the report [*Advancing Graduate Education in the Chemical Sciences*](#) was commissioned by 2012 American Chemical Society president Bassam Shakhshiri. It included recommendations for federal agencies, university chemistry departments, and ACS.

In commemoration of the report's 10th anniversary, the Society Committee on Education (SOCED) passed a resolution recognizing the progress that has been made in developing ACS resources and activities that support graduate students and postdoctoral scholars.

We all can play roles, individually and collectively, in engaging and empowering graduate students and postdoctoral scholars. Inviting them to participate, listening to their questions and input, guiding them to appropriate ACS resources, helping them build their mentorship skills and networks, and involving them in developing plans for activities and resources are all ways to be more inclusive and more responsive to their needs and interests.

Career preparation was the focus of many of the recommendations from the Advancing Graduate Education report and the 2018 National Academies of Sciences, Engineering, and Medicine's report [Graduate STEM Education for the 21st Century](#). The ACS graduate student surveys in [2013](#) and [2019](#) provided insights on career interests and plans. Recognizing that individual development plans (IDPs) can help focus the exploration of and preparation for a variety of careers, ACS launched [ChemIDP](#) in 2015. The design of this tool, as well as ChemIDP and [ACS Career Kick-Start Workshops](#), is based on research on the career planning and preparation process, along with input from interviews with graduate students, postdoctoral scholars, faculty, career advisers, and mentors. Because of user feedback, My Vitae (a curriculum vitae–building tool) has been added to ChemIDP, and the [Careers & the Chemical Sciences](#) website has been redesigned. Insights from the Impact Indicators and Instruments for IDPs (I3IDP) project and the [ACS Bridge Project](#) are improving the effectiveness of career resources, ensuring that they serve those from underrepresented groups.

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Graduate students and postdoctoral scholars are connected to these and other resources in a number of ways, including through peers, advisers, and role models. The ACS online magazine [Graduate and Postdoctoral Chemist](#) has sections on career advice, career paths, lab life, and wellness. The ACS [Graduate Student Organizations](#) (GSOs) program provides resources and grants for campus-based graduate student communities interested in networking, career preparation, outreach, and professional development.

ACS is being intentional about including graduate students and postdoctoral scholars in meaningful ways. Service on groups such as the Graduate Student and Postdoctoral Scholars Advisory Board, [Graduate Student Symposium Planning Committee](#), and [Younger Chemists Committee](#) helps build and hone leadership skills, strengthen professional networks, and develop future leaders of the society.

Looking ahead, we can play a role in developing leaders by advancing three additional areas: providing mentorship; fostering diversity, equity, inclusion, and respect (DEIR); and promoting safety. ACS is piloting the [Graduate Student and Postdoctoral Scholars Recognition Program](#), inviting graduate programs to acknowledge leadership in each of these areas.

The 2019 National Academies of Sciences, Engineering, and Medicine's report [The Science of Effective Mentorship in STEMM](#) provides guidance for developing effective relationships and programs. Partnering with the [Center for the Improvement of Mentored Experiences in Research](#), ACS is offering the [Mentor Training Workshop for Graduate Students and Postdoctoral Scholars](#).

A collection of resources at www.acs.org/diversity is being used across the chemistry community to advance the ACS core value of diversity, equity, inclusion, and respect. The [ACS Student Communities DEIR Grant](#) provides support for GSOs.

The [ACS Center for Lab Safety](#) offers access to resources to develop and support the safety practices called for in Advancing Graduate Education in the Chemical Sciences and the ACS core value of professionalism, safety, and ethics. Future efforts will be informed by the 2022 Safety Summit focused on industry's needs and expectations related to laboratory safety for new PhD hires in R&D.

Connecting graduate students and postdoctoral scholars with ACS and the chemistry community in ways that engage and empower them takes commitment and a collection of near- and long-term efforts. Thank you to the many people who help guide and implement the experiences and resources that ACS offers.

Let us know how SOCED can work with you to engage and empower graduate students and postdoctoral scholars. Send your suggestions and questions to education@acs.org. Views expressed are those of the author and not necessarily those of C&EN or ACS.

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