

Actions Vs Words to Liberate Women Chemists

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Despite nationwide initiatives to improve the retention of women and minorities in the sciences and engineering, the percentage of female graduate students in chemistry is at 40.9% and the percentage of female postdoctoral fellows is at 25.5% in 2019; furthermore the percentage of female chemists employed by the federal government has decreased by 4% from 2008 to 2017 in the United States. The gender inequality in science is an urgent issue; therefore, making progress empowering women in science is opportune. As pandemic took over the world, the motherhood penalty on female professionals in the sciences including chemistry has become even more prominent issue due to new norm of working remotely while you take care of your young children. This seemingly impact gender equality in the field as the productivity gap between a mother and their male/childless peers become increasingly larger allowing pandemic to reverse advances and further deepen the gender gap in science.

What actions can be taken by any established female chemist to support a peer and/or an emerging female chemist with the ambition to overcome the gender inequality in the field? Several recent communications have discussed the impact of following actions to increase the diversity in the workforce in chemistry and engineering fields: actively promote, advocate for, intentionally hire, support, and mentor the female students, faculty, and co-workers; speak up and amplify the voice against discriminatory words and actions; educate yourself and co-workers on systematic and

insidious bias in the science; promote hiring merely based on merit; purposefully act from the editorial level to improve the representation and highlight the accomplishments of female chemists in scientific journals. The immediate and long-term consequences of aforementioned actions will liberate women to achieve more while advancing the field of chemistry. Educators also have the immense opportunity and responsibility to create an inclusive classroom that accepts all levels of diversity will ensure the full learning experience for all types of students and also facilitate the retention of more women and minorities in the sciences and engineering. Even an educator in the physical sciences can find ways to introduce the importance of human diversity to the advancement of society using an obvious (natural) connection to the class material so that the students get a novel yet effective perspective of diversity, which in turn gradually creates an inclusive classroom that nurtures all gender types equally, as the members of the classroom identify the importance of classroom diversity to the advancement of their microcommunity. With these critical goals in mind, an inclusive environment was promoted in an organic chemistry classroom by identifying and utilizing a natural point of entry in organic chemistry to emphasize the concepts of diversity and inclusion with the interest of promoting women representation in the field of chemistry. One simple action to empower women in the field is worth a thousand words!



Dr. Nawarathne earned her BSc in Chemistry with First Class Honors from University of Colombo, Sri Lanka and her PhD in bioorganic chemistry from Michigan State University, USA. She joined the College of Pharmacy at University of Michigan in Ann Arbor, USA as a research fellow, where her research focused on antibiotic development. Her research interests include development of efficacious therapeutics from large natural product scaffolds, with proven biomedical applications, through targeted synthesis. She currently serves as an Associate Professor in Chemistry at Lyon College, Arkansas, USA.