

Shining the light on outstanding contributions by women chemists

DOROTHY J. PHILLIPS, ACS DIRECTOR-AT-LARGE

When President Barack Obama awarded a 2015 Presidential Medal of Freedom to Katherine Johnson, a mathematician who charted the trajectory for Alan Shepard's space flight, many Americans—myself included—became aware of the contributions that a group of African American women made in the 1940s to 1960s to the U.S.'s aeronautics and space programs. These women were the subjects of Margot Lee Shetterly's book, "Hidden Figures," recently made into a film.

It took just one prominent person, Obama, to select a woman for a major award to make the entire world aware of the science, technology, engineering, and mathematics (STEM) contributions of a generation of women.

Relatedly, in 2016, the ACS Women Chemists Committee and the ACS Board Committee on Grants & Awards (G&A)—whose work is now incorporated into the Board Committee on Professional & Member Relations—realized that a key to increasing the number of underrepresented chemists receiving awards was to increase the number of women, minorities, and industrial chemists who were being nominated for these awards. How did they reach this conclusion?

In a Feb. 22, 2016, Comment in C&EN titled "Help Diversify ACS National Awards," then-G&A chair George Bodner and former chair Valerie Kuck reminded readers of ACS's core value in diversity and inclusion and the society's long-term commitment to achieving diversity in the grants and awards program. They acknowledged the criticism regarding a lack of diversity among ACS national award recipients and admitted that more work needs to be done.

—What was causing this lack of diversity? they asked. It could be due to bias within the award selection process. Or it could

result from the unevenness in the number of individuals from diverse groups who are nominated for national awards. Data from an analysis of nominees and recipients for ACS national awards between 2012 and 2016 led Bodner and Kuck to conclude that the underrepresentation of women and industrial chemists among recipients can be



directly linked to their underrepresentation in the pool of nominations for these awards.

Building on this conclusion, the Women Chemists Committee and G&A sponsored a session at the fall 2016 ACS national meeting in Philadelphia titled "Increasing Successful Awards Nominations from Underrepresented Groups." The session resulted in a webinar, "Becoming 'Award Ready,'" which was held on Sept. 20, 2016, and covered what nominees and nominators need to know to prepare a successful nomination package.

Since then, there has been a strong response to the emphasis on nominating more women chemists. Compared with 2016, when only six women received ACS national awards, including one award that goes only to women, in 2017 there were 20 women awardees. In 2018 there were 21.

In 2018, more women were recognized for their outstanding scientific contributions in more distinct disciplines than before. Ten women in different fields of chemistry received their first recognition at the national award level. This year, the James Flack Norris Award in Physical Organic Chemistry had its first woman recipient in its 53-year history, Cynthia J. Burrows.

This emphasis on increasing nominations of underrepresented groups has led to an increase in the representation of women and industrial chemists on national awards and canvassing committees. The society's highest award, the Priestley Medal, has been awarded to four women since its establishment in 1922. Two of the women were awarded in the past three years:

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Jacqueline K. Barton in 2015 and Geraldine Richmond in 2018. The other two women were awarded in 1997 (Mary L. Good) and 2000 (Darleane C. Hoffman). Hopefully, we have finally turned a corner and have arrived at a place where men and women are presented with the Priestley Medal in a more equitable ratio.

The Board Committee on Professional & Members Relations will continue to seek ways to ensure that our programs are in line with ACS's core value of diversity and inclusion. We also need help from the ACS membership. ACS members can make a difference by making a conscious, concerted effort to nominate deserving women and minorities for national awards. Will women, minorities, and industrial chemists continue to be hidden figures, inadequately recognized for their contributions to STEM?

Obama showed that it takes one person to lift the veil obscuring years of outstanding scientific contributions. I am asking ACS members everywhere to look harder—and perhaps in different places—to identify colleagues who deserve our society's consideration for its many awards.

Views expressed are those of the author and not necessarily those of C&EN or ACS.