

TOWNS, MARCY. *Purdue Section.* Purdue University, West Lafayette, IN.

Academic Record: Linfield College, B.A., 1985; Purdue University, M.S., 1990, Ph.D., 1994.

Honors: ACS Outstanding Service to the Division Award, 2020; ACS James Flack Norris Award for Outstanding Achievement in Teaching Chemistry, 2017, ACS Award in Research for the Teaching and Learning of Chemistry, 2017, ACS Fellow, 2012; Royal Society of Chemistry (RSC) Nyholm Prize for Education, 2019; Fellow of the RSC, 2019; International Union of Pure and Applied Chemistry (IUPAC) Distinguished Women in Chemistry or Chemical Engineering, 2021; Fellow of the American Association for the Advancement of Science (AAAS), 2009; Linfield Distinguished Alumni Award, 2015; Society for College Science Teachers Outstanding Undergraduate Science Teacher Award, 2015; Purdue University: Morrill Award, 2021; Most Distinguished Faculty for Academics, 2021; Book of Great Teachers, 2019; Jefferson Award (Multiplying Good), 2019; Distinguished Women Scholars, 2017; Special Boilermaker Award, 2016; Class of 1922 Outstanding Innovation in Helping Students Learn Award, 2015; College of Science Diversity Award, 2015; Charles B. Murphy Outstanding Undergraduate Teaching Award, 2013; Arthur Kelly Outstanding Undergraduate Teaching Award, 2013; College of Science Leadership Award, 2013; Teaching Academy Fellow, 2009; Learning Community Ambassadors Advocate Award, 2006.

Professional Positions (for past 10 years): Purdue University, Bodner-Honig Professor of Chemistry, 2020 to date; Purdue University, Professor of Chemistry 2012-20.

Service in ACS National Offices: National Awards Committee, Member, 2016-17, Chair, 2018-20.

Service in ACS Offices: *Division of Chemical Education:* Immediate Past Chair, 2016, Chair, 2015, Chair-Elect, 2014; Alternate Councilor, 2000-02; Biennial Conference on Chemical Education, Member, 2018-22, General Chair, 2022, Organizing Committee, 2006; Exams Institute Board of Trustees, Member, 2002-10; Examinations Committees: ACS Diagnostic for Undergraduate Chemical Knowledge, 2006-08; Blended General Chemistry, 2003-05; Physical Chemistry, Member, 2001-05; Second Semester General Chemistry, Member, 1996-98; Strategic Planning Committee, Member, 2007; Committee for Personnel and Nominations, Member, 2007-12; Program Committee, Member, 1999-2001; Chemical Education Research Committee, Member, 1998-2004;

Member (current): Member of the ACS since 1987. International Union of Pure and Applied Chemistry, Royal Society of Chemistry, American Association for the Advancement of Science (AAAS). *ACS Division(s):* American Association of Chemistry Teachers; Chemical Education.

Related Activities: *Journal of Chemical Education:* Associate Editor 2012-20, Acting Editor in Chief, June-August 2016; National Academies of Sciences, Engineering and Medicine Board on Science Education, Member, 2019-2022; IUPAC Committee on Chemical Education 2014-21; IUPAC Interdivisional Committee on Nomenclature, Terminology, and Symbols, 2018-22, Mole Committee (Project #2013-048-1-100 Physical and Biophysical Chemistry Division); Gordon Research Conference on Chemistry Education: Research and Practice, Chair 2011, Vice-Chair 2009; *Chemistry Education Research and Practice:* Editorial Board, 2010-14; Linfield University Board of Trustees, 2020 to date; Children's Museum of Indianapolis-Eli Lilly and Company Girls and Young Women in STEM, Advisory Committee

2020-21; Transforming Research in Undergraduate STEM Education Conference PI, 2010, 2012, Co-PI, 2017; Weizmann Institute of Science Scientific and Academic, Advisory Committee, 2021-22; *Journal of College Science Teaching*: Column Editor 2007-11; Purdue University Faculty Athletics, Representative, 2017 to date, Big Ten Joint Group Co-Chair, 2020-21; >115 publications (2 ACS Editor's Choice).

STATEMENT

Marcy Towns

I have been an ACS member since 1987, when I was a high school chemistry and mathematics teacher in Oregon. Across my career first as a high school teacher, then as a graduate student, and in academia, the ACS has provided opportunities to share scholarship and innovation, to support and drive forward education in chemistry in K-16 classrooms, and to engage the public in the learning of science. The personal and professional network created through the membership of the ACS allows us the opportunity to collaborate and innovate, to mentor, and to advance the field of chemistry. The opportunity to serve the membership and to be a leader in the most disruptive time that the field has experienced, is what has inspired me to volunteer to run as a nominee for District II Director.

The current pandemic has created new challenges for the ACS that can be addressed leveraging the breadth of expertise this professional society possesses. Chemistry education stands out as one of the most critical priorities as we respond to the needs of students who will be the chemical professionals of the future. ACS has supported members with programming and platforms to share ideas and information about the challenges and opportunities of operating in this environment. For example, I have used resources and webinars from the AACT in our general chemistry program to support and sustain student learning during the pandemic. Continuing to support the Society's efforts in this space is of the utmost importance. These actions support our members and are at the heart of the creating value for members engaged in education.

Education and professional development challenges that have been deepened by the pandemic are also related to the promotion of diversity, equity, inclusion, and respect. The pandemic's disruption to education has lay bare to inequities in the educational systems and has had differential impact on students, parents, teachers, and administrators, depending on the district in which they reside. In the recently published *Call to Action in Science Education: Building Opportunity for the Future*, by the National Academies, they note that the average elementary classroom focuses on science for less than 20 minutes per day and approximately 22% of high school students are proficient in science. It is clear that many students are not engaging in a high-quality science education, and the report notes that this is especially true for students of color and students who live in poverty. Ultimately, the impact is that these students are denied of opportunities in STEM, in our work force, educational environment, and in the public sphere. The ACS can leverage its educational initiatives and activities to support justice, equity, diversity, inclusion, and respect in the classroom and improve science education and chemistry education for all.

In my time as an ACS member, I have had the opportunity to provide a US perspective on key chemistry issues. I was a member of the IUPAC project committee that engaged in a critical review

of the proposed definitions of fundamental chemical quantities (project 2013-048-1-100) including the definition of the mole. In November 2021, I had the privilege of speaking at the first Chinese Chemical Society – American Chemical Society Chemical Education Bilateral Forum, Chemical Education for the Future event. This event reached over 50,000 teachers in China, sharing across continents, languages, and educational systems, our passion and our research related to the teaching and learning of chemistry.

As the ACS seeks to grow its membership in the US and globally, its touchstones are the core values of the society – a passion for chemistry and the global chemistry enterprise; its focus on members; professionalism, safety, and ethics; and diversity, equity, inclusion, and respect. These values united with the mission and vision of the ACS provide a framework for advancing the broader chemical enterprise and improving people's lives through the transforming power of chemistry. My goal will be to actively listen to and engage with all parts of the ACS membership and activities to develop multiple paths through these disruptive times that will create opportunities that provide the highest value for ACS members and supports our core values. I ask for your vote as Director, District II to serve our ACS membership and to work with you to accomplish that goal.