



Iota Sigma Pi

National Honor Society for Women in Chemistry

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Iota Sigma Pi Gives 2023 National Honorary Member Award to Angela K. Wilson of Michigan State University.

Iota Sigma Pi, the National Organization for Women in Chemistry, has selected Dr. Angela K. Wilson, John A. Hannah Distinguished Professor of Chemistry in the department of chemistry of Michigan State University to receive the 2023 National Honorary Member Award. National Honorary Member is the highest award that Iota Sigma Pi bestows triennially on outstanding women chemists for their significant achievements in chemistry.

Dr. Wilson is John A. Hannah Distinguished Professor of Chemistry at Michigan State University (MSU), an Associate Dean for strategic initiatives in the MSU College of Natural Science and the Director of the MSU Center for Quantum Computing, Science, and Engineering. She is also 2022 President of the American Chemical Society (ACS), a member of ACS board of directors, 2016-2018 Director of the Division of Chemistry at the U.S. National Science Foundation (NSF), and a recipient of numerous national and international honors that include International Union of Pure and Applied Chemistry (IUPAC) Distinguished Woman in Chemistry and ACS's Wilfred T. Doherty Award. The award will be presented to Dr. Wilson at the Iota Sigma Pi 2023 Triennial Convention in suburban Chicago in June 2023.



Dr. Wilson has earned a Ph.D. in chemical physics from the University of Minnesota and a B.S. in chemistry from Eastern Washington University. She then was a postdoctoral fellow at the Environmental Molecular Sciences Laboratory at Pacific Northwest National Laboratory in theoretical physical chemistry.

Dr. Wilson is a leader in the field of computational/theoretical physical chemistry. Her primary focus has been development of *ab initio* approaches for accurate prediction of thermochemical properties of molecules. Her research spans quantum mechanics, quantum dynamics method development, drug design, environmental chemistry, and catalysis. One of her most notable achievements is successful development of correlation consistent Composite Approach (ccCA) to molecular thermochemistry that allows to predict thermochemical properties of main group, transitional metals, and entire periodic table with unprecedented accuracy. She has designed complete basis set (CBS) strategies that allow it to (approximately) overcome errors in the exact

description of molecular orbitals. Her methodology is used worldwide and is currently included in most computational chemistry software packages such as Gaussian, GAMESS, NWChem, ORCA, and others.

To quote one of the nominators, "Professor Wilson's research has made invaluable contributions to our understanding of a broad range of challenging chemical problems."

Her research resulted in over 180 publications to date with >13,600 citations. She has also edited 6 books, including "Pioneers in Quantum Chemistry".

In addition to her research work, Dr. Wilson has devoted much of her time to service. She is a member of editorial boards of multiple scientific journals such as *Journals of Physical Chemistry*, *Journal of Physical Chemistry Letters*, *International Journal of Quantum Chemistry*, and many others, and has been an Editor of *Computational and Theoretical Chemistry*. She had also served on multiple Scientific Advisory Committees for Conferences and workshops, chaired the 2018 Gordon Conference on Computational Chemistry, and was the organizer of the physical chemistry program at the 2017 IUPAC World Congress. This list is not complete.

Dr. Wilson has invested significantly in education, mentoring over 150 students and postdoctoral fellows, with 25 students earning Ph.D.'s and 5 students earning M.S. degrees. Among her trainees are impressively accomplished scientists and winners of most prestigious national scientific awards. She had been very active in science outreach activities on local, national, and international levels. Dr. Wilson takes part in career and curriculum development for undergraduate students, trying to incorporate quantum science into a national interdisciplinary curriculum.

She has also been a long time advocate for women chemists, leading an international recognition program via IUPAC and several Gordon Research Conference's Power Hours discussion groups addressing challenges women face in science.

IOTA SIGMA PI is the National Honor Society for Women in Chemistry. Its major objectives are to promote interest in chemistry among women students, to foster mutual advancement in academic, business, and social life; and to stimulate personal accomplishment in chemical fields. IOTA SIGMA PI serves to promote the advancement of women in chemistry by granting recognition to women who have demonstrated superior scholastic achievement and high professional competence by election into IOTA SIGMA PI. www.iotasigmapi.info

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