Iota Sigma Pi



National Honor Society for Women in Chemistry

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Iota Sigma Pi Gives 2025 Agnes Fay Morgan Award to Dr. Yan-Yan Hu of Florida State University (Tallahassee, FL)

Iota Sigma PI, the National Organization for Women in Chemistry, has selected Dr. Yan-Yan Hu, Professor of the Department of Chemistry and Biochemistry at Florida State University (Tallahassee, FL), to receive the 2025 Agnes Fay Morgan Research Award.

Dr. Hu has earned her PhD in analytical chemistry from Iowa State University (Ames, Iowa). She then worked as a Royal Society Newton Fellow and Marie Curie Research Fellow at the University of Cambridge (Cambridge, UK). Afterwards, she joined Florida State University (Tallahassee, FL), where she is now a Full Professor.



Dr. Hu's highly innovative scientific work is significantly advancing the fundamental understanding of notoriously difficult-to-study areas of ion transport and interface chemistry within complex solids. These processes are crucial for the efficiency, stability, and safety of various energy systems, including batteries, fuel cells, sensing devices, and membranes used in water purification. In addition to their technological significance, the movement of ions and interface chemistry are central to many critical biological functions.

Dr. Hu has pioneered new methods of solid-state Nuclear Magnetic Resonance (NMR) to study ion migration non-invasively. She successfully applied her new NMR technique to a wide range of 3D solids, including inorganic materials, natural polymer ion conductors, and composites, thereby setting a new standard for investigating ion transport. While traditional NMRI focuses on hydrogen (¹H), she expanded it to other isotopes, such as ¹Li, for studying solid materials with improved spatial resolution and image fidelity. She is now expanding her research to explore biological systems, including protein-protein interactions and dynamics in functional protein complexes.

Dr. Hu is a highly respected and collaborative scientist in her field. She has authored over 70 peer-reviewed articles, including publications in top-tier journals, and her work is exceptionally well-cited, with over 1,200 citations annually. In addition, she holds more than 10 patents. Dr. Hu's achievements were recognized by many prestigious awards and fellowships: she is a recipient of Scialog Team Award for Advanced Energy Storage Research from Research Corporation of Science (2019, 2020), NSF CAREER award (2019), Emerging Young Investigator Award, Florida Local Section of the American Chemical Society (2017), Marion

Milligan Mason Award from AAAS (2017), and many others. She is also mentoring many graduate and undergraduate students, as well as high school students. As one of the award judges commented: "Her work is in a field where many extremely innovative chemists have been working for years, and yet she has made important discoveries that have eluded them and brought clarity to long-standing debates. Her work has confronted conventional wisdom and, as such, has had a huge impact."

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