

2019 ACS National Award winners

Recipients are honored for contributions of major significance to chemistry

by [Linda Wang](#)

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Joel Henry Hildebrand Award in the Theoretical and Experimental Chemistry of Liquids: Gregory A. Voth

Sponsor: ExxonMobil Research and Engineering

Citation: For his pioneering research on the properties of complex liquid systems, including hydrated protons in water and ionic liquids, using powerful new computational methods

Current position: Haig P. Papazian Distinguished Service Professor, Department of Chemistry, James Franck Institute, and Institute for Biophysical Dynamics, University of Chicago

Education: BS, chemistry, University of Kansas; PhD, theoretical chemistry, California Institute of Technology



Credit: Courtesy of Gregory A. Voth

Gregory A. Voth

Voth on what he hopes to accomplish in the next decade: “I hope to help advance the frontiers of theoretical chemistry so that more of the truly complex problems faced by chemists can be rigorously addressed via theory and computation. Typically, these problems may occur for complex liquids, multiphase and interfacial systems, new materials, and biomolecular assemblies. They involve multiple coupled length and time scales and will require new thinking that unifies quantum mechanics and statistical mechanics in unanticipated ways.”

What his colleagues say: “Voth has produced groundbreaking work that has shaped the understanding of mechanism and process in the broad field of liquid-state chemical dynamics. He has made pioneering contributions to multiple areas of the theory of liquids that include but are not limited to the quantum behavior of liquid-state systems such as water, proton transfer in liquids, and the structure and dynamics of ionic liquids.”—David Reichman, Columbia University