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Mark Ratner
Co-Director
Initiative for Sustainability and Energy (ISEN)

Mark Ratner is a materials chemist, whose work focuses on the interplay between molecular structure and molecular properties. This includes such aspects as molecular electronics, molecular optoelectronics, molecular systems design and biomolecular behavior, as well quantum and classical methodologies for understanding and predicting molecular structure and response. The major focus of his research for the last three decades has been the understanding of charge transfer and charge transport processes based on molecular structures, ranging from nonadiabatic intramolecular behavior to aspects of molecular devices, including photovoltaics, conductive polymers, molecular transport junctions and molecular switches.

His professional history involves undergraduate work at Harvard, graduate work at Northwestern, postdoctoral work at Aarhus and Munich, and faculty positions at New York University and Northwestern. He is now Dumas University Professor at NU and Co-Director of the Initiative for Sustainability and Energy at Northwestern (ISEN). He has very active international collaborations, particularly in Denmark, Israel and the Netherlands. He has been awarded the Feynman Prize, the Langmuir Award of the American Chemical Society, and is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the International Academy of Quantum Molecular Sciences, the Royal Danish Academy of Sciences and an annual canoe trip which puts all things back into perspective.