

Electroanalysis. An emphasis will be placed on the fundamental understanding and molecular design of modular structure-property relationships within this class of 2D materials. The second part of this talk will introduce a novel approach to designing materials for temporary adhesion, which relies on the use of sublimable molecular solids, with promising utility in the fabrication of microelectronic devices. Taken together, these research thrusts will demonstrate how molecular-level features within solid state materials can be used to tune their stimuliresponsive function.

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BIO

Katherine was born and raised in Eastern Ukraine and emigrated with her family to the United States as she was starting high school. She obtained her B.S. in Chemistry at Boston College, where she developed a passion for Materials Chemistry, working in the laboratory of Lawrence T. Scott. She earned her Ph.D. in Chemistry from Harvard University under the guidance of George M. Whitesides and completed her postdoctoral training with Timothy М. Swager at the Massachusetts Institute of Technology. Katherine began her independent scientific career as an Assistant Professor in the Department of Chemistry at Dartmouth College in July 2015. Her research at Dartmouth focuses

on the development of multifunctional materials using methods of bottom-up synthesis and self-assembly for solving chemical challenges in electroanalysis, microelectronics, and energy. She is a recipient of the Army Research Office Young Investigator Award (2017), Sloan Research Fellowship (2018), PMSE Young Investigator Award (2018), 3M Non-Tenured Faculty Award (2018), Cottrell Scholar Award (2019), NSF CAREER Award (2020), and Camille Dreyfus Teacher-Scholar Award (2020).

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