

# MRSEC SEMINAR SERIES

## Elastomeric Surfaces for the Rational Synthesis, Assembly, and Fabrication of Adaptive, Functional Materials

In this talk I will highlight our recent findings related to the synthesis and application of mechanically tunable surfaces, which include the assembly of solids (e.g., inorganic films with switchable reflectance and microparticles with optical/catalytic activity) and the manipulation of liquids (e.g., picoliter-volume droplets of aqueous solutions and prepolymer droplets). The unique properties of these surfaces and the diverse capabilities they provide will enable new methods and structures for the micro-/nanoscale manipulation, organization, and assembly of liquids/solids, and provide new techniques for the fabrication of hybrid structures applicable to emergent technologies, for example, soft sensors, optics, and electronics, soft actuators for soft machines/robotics, and smart surfaces with adaptive adhesion.

*Stephen A. Morin is an Assistant Professor in the Department of Chemistry at The University of Nebraska – Lincoln. His research interest include: materials chemistry, nano-/microscale assembly, nanomaterials synthesis and characterization, adaptive materials, soft robotics, hybrid materials systems, and bottom-up fabrication. He joined the Department of Chemistry at the University of Wisconsin – Madison as a graduate student in 2005 and, under the direction of his advisor Professor Song Jin, received his Ph.D. in Chemistry in 2011. His research and thesis, titled “Dislocation-Driven Synthesis and Bioinspired Assembly of Functional Nanomaterials,” focused on the rational synthesis and assembly of nanomaterials based on fundamental concepts of crystal nucleation and growth. From 2011 until 2013, Stephen was a postdoctoral fellow in the lab of Professor George M. Whitesides in the Department of Chemistry and Chemical Biology at Harvard University. At Harvard, Stephen conducted research in the areas of soft robotics and adaptive materials. Stephen joined the faculty in the Department of Chemistry at UNL in Fall of 2013. He was awarded a 3M Non-tenured Faculty Award in 2015 and a NSF CAREER Award in 2016.*



### Stephen A. Morin

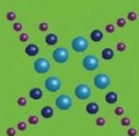
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**Thursday, December 7th, 2017**

**Cook Hall, Room 2058**

**4:00 p.m. - 5:00 p.m.**



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