



CLARK UNIVERSITY

Gustaf H. Carlson School of Chemistry and Biochemistry

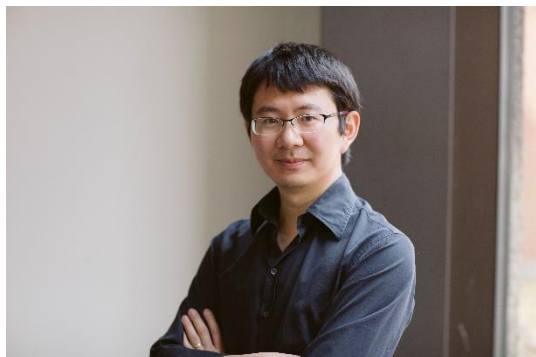
FALL 2021 SEMINAR SERIES

Chenfeng Ke, Ph.D.

Assistant Professor

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Dartmouth College



Bio: Dr. Chenfeng Ke earned his B. Sc. (2004) and Ph. D (2009) under the supervision of Prof. Yu Liu at Nankai University in China, where he studied the molecular recognition and assembly behaviors of macrocyclic molecules. In 2007, he was a visiting Ph. D student at Osaka University in Japan. After the completion of his Ph.D, he was awarded a Newton International Fellowship by the Royal Society (UK) to pursue research with Professor Anthony Davis between 2009 and 2011 at the University of Bristol. He subsequently joined Professor Sir Fraser Stoddart's (2016 Nobel Prize in Chemistry) research group at Northwestern University as a postdoctoral research

fellow (2011–2015) before taking up his assistant professorship at Dartmouth College. His current research interests are developing polymeric materials for 3D printing applications and designing porous organic crystals for energy-related applications.

“Supramolecular 3D-printing polymers and elastic porous organic crystals”

Abstract: Nature long ago solved problems plaguing contemporary chemists with polydispersity and controlled synthesis at the nanoscale. The blueprint of life, DNA, is synthesized with high precision with the aid of multiple hydrogen-bonding interactions. Our research program aims to mimic the principle of nature-made materials and develop smart organic and polymeric materials through the organization of multivalent hydrogen-bonding interactions to achieve properties that are currently beyond our grasp. In this talk, I will be presenting two major projects in my research group: (1) developing supramolecular 3D-printing materials that change their shapes under the influence of external stimuli, and (2) designing elastic crystalline porous organic frameworks that adsorb substrate with elastic expansion.

Thursday, October 14th 2021

12:00 PM | Via Zoom