



SEMINAR

Bioinspired Sensing and Actuating Materials

Speaker: Dr. Xuemin Du

Abstract: Bioinspired polymers are originated from the inspiration of nature, such as chameleon and Venus flytraps. Due to their intriguing properties, these materials have been wisely explored in various research fields like sensors, actuators, etc. Here, we would like to present our recent progress on chameleon-inspired structural color materials firstly, including bio-inspired fabrications and sensing applications. Then, the Venus flytraps-like actuators, which can change their shapes accordingly after triggered with specific solvent, near-infrared light and temperature, are followingly introduced. Based on the rapid progress in this field, we believe bioinspired polymers will find great potential applications in biomedical devices, regenerative medicine and soft robotics.

Biography: *Dr. Xuemin Du* received his B.E. (2006) in Polymer Science and Technology from Hefei University of Technology. He received two Ph.D. (2012) from University of Science and Technology of China (with Prof. Zhicheng Zhang) and City University of Hong Kong (with Prof. Lam Hon Wah Michael). He joined the Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences (CAS) in 2013. He is currently an associate professor at the Institute of Biomedical and Health Engineering (IBHE) at SIAT. He was awarded with “Guangdong High-level Personnel of Special Support Program-Outstanding Young Scholar in Science and Technology Innovation”, “Overseas High-Caliber Personnel”, and “High-Level Professional Talent”. His research interests cover mainly micro/nano fabrication, chem/bio sensing and bio-inspired intelligent materials.



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