

学术报告



Mechano-adaptable Materials for Flexible and Conformal Electronics

时间: 2018年7月2日 (周一) 15:30-17:00

地点: 化新楼211会议室 (篮球场北侧)

报告人简介:

陈晓东, 教授, 博士生导师, 新加坡南洋理工大学材料科学与工程学院副院长, 柔性器件创新中心(iFLEX)主任。于1999年获得福州大学化学学士学位, 2002年获得中科院物理化学硕士学位, 2006年获得明斯特大学生物化学博士学位, 随后在美国西北大学进行博士后研究工作。自2009年进入南洋理工大学开展独立研究工作。主要从事可程序化材料在能源的转化、柔性电子器件、以及纳米生物界面等方面的工作。研究成果在 *Nat. Nanotech.*, *Nat. Chem.*, *Nat. Commun.*, *Adv. Mater.*,



JACS, *Angew Chem.* 等国际知名刊物发表论文200余篇, 他引超过5000次。目前担任 *Nanoscale* 和 *Nanoscale Horizons* 期刊的副主编和科学编辑, 同时也是 *Adv. Mater.*, *Scientific Reports* 及 *Journal of Laboratory Automation* 等期刊的编委会成员。2016年入选英国皇家学会会士。曾获得 *Small* 青年科学家创新奖、新加坡国立研究基金会研究员奖、Lubrizol 青年材料科学家奖等荣誉。

报告简介:

Smart wearable sensors not only enrich daily lives by providing enhanced smart functions, but also provide health information by monitoring body conditions. For example, patchable sensors have the potential to better interface with human skin, thus improving the sensitivity of detection of health indicators. However, the crucial aspects toward the advancement of such sensors include the development of novel mechanically durable materials, flexible and stretchable substrates, deformable electrodes and circuits, bio-stable and bio-compatible, and so on. In this talk, I will present our latest progress fabricating conformal sensors based on the rational design of structural materials, individual devices development, and integration.

代表作:

- [1] Supramolecular Hydrogels for Antimicrobial Therapy. *Chem. Soc. Rev.* **2018**. DOI:10.1039/C8CS00128F
- [2] An Artificial Sensory Neuron with Tactile Perceptual Learning. *Adv. Mater.* **2018**, 30, 1801291.
- [3] Quadruple H-bonding Crosslinked Supramolecular Polymeric Materials as Substrates for Stretchable, Anti-Tearing, and Self-Healable Thin Film Electrodes. *J. Am. Chem. Soc.* 2018, DOI: 10.1021/jacs.8b01682.
- [4] Fluoroethylene Carbonate Enabling Robust LiF-rich Solid Electrolyte Interphase to Enhance the Stability of MoS₂ Anode for Lithium Ion Storage. *Angew. Chem. Int. Ed.* **2018**, 57, 3656.
- [5] Nature-Inspired Structural Materials for Flexible Electronic Devices. *Chem. Rev.* **2017**, 117, 12893.

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