Title:

Fabrication of nano-electronics and their applications: from brain scienceto solar cell

Main content:

Lithography methods are very important and useful to our modern life, especially to the production of nano-electronics. In this talk, I am going to talk about two examples of the application of nanoelectronics. The first part of my talk will focus on the design, fabrication and application of ultrasmall, ultraflexible brain probe. Some knowledge about neurons will be covered. The second part of my talk will be focusing on the gold nanostructures fabrication by unconventional scanning probe nanolithography and its application in the optical fields.

主讲人简介：

魏晓玲，男，1986年生。2008年本科毕业于中国科学技术大学高分子科学与工程系，后于2008-2013年在香港中文大学化学系学习并获得博士学位。2013年到2014年在香港理工大学进行博士后学习研究，并于2014年11月进入**美国德州大学奥斯汀分校从事博士后研究员**工作。研究背景和兴趣主要包括生物传感器及生物医学材料，微纳电子器件，脑电极，界面胶体物理化学，功能高分子等。迄今在国际期刊上发表学术论文20余篇，包括Science子刊***Sci. Adv., Adv.Mater., Nano Lett., Acs Nano, Small, Chem. Comm., Lab on a chip, Chem-Euro J., Polym. Chem., Langmuir, J. Phys. Chem.B***等。拥有1项美国专利申请；在Science子刊***Science Advances***发表的关于脑电极领域的封面文章，引起了数十家有影响力的媒体的报道，包括**IEEE spectrum, Nanowerk, Phys.org, ScienceDaily**等。

Dr.Xiaoling Wei was born in 1986. After completing his B.Eng. in Department of Polymer Science and Engineering in the University of Science and Technology of China in the year 2008, he went to the Chinese University of Hong Kong and earned his doctorate degree in the Department of Chemistry. After that, he did his postdoctoral workin the Hong Kong Polytechnic University during 2013-2014, and then Dr. Wei continued his research as a postdoctoral fellow in the University of Texas at Austin (U.S.A). His research background and interests are biosensors, biomedical materials, micro-nanoelectronics, brain electrodes, interfacial colloidal physical chemistry, functional macromolecules etc. Dr. Wei has published 20 more papers in the international top-tier journal, including ***Sci. Adv.*** (sister journal of ***Science***), ***Adv.Mater., Nano Lett., Acs Nano, Small, Chem. Comm., Lab on a chip, Chem-Euro J., Polym. Chem., Langmuir, J. Phys. Chem.B*** etc. He also holds one U.S. Patent. The paper published as cover in ***Science Advances*** about brain probe has been reported by various influential media, including **IEEE spectrum, Nanowerk, Phys.org, ScienceDaily** etc.