

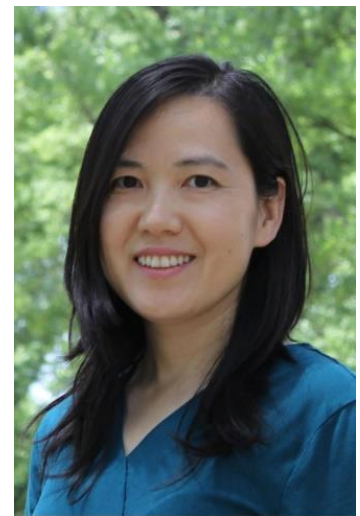
# 关于 UC Berkeley 土木与环境工程系 MI BAOXIA 教授学术报告通知

报告题目: **2D Nanomaterials for Membrane Separation and Solar-Powered Desalination**

报告时间: **2018 年 05 月 21 日 13:30-14:30**

报告地点: **环境与资源学院 B110 学术报告厅**

**报告人简介:** Prof. Baoxia Mi is in the Civil and Environmental Engineering Department at the University of California, Berkeley. She received BS and MS from Tianjin University in China, Ph.D. from the University of Illinois at Urbana-Champaign, and a postdoctoral training at Yale University. She directs the research and educational activities of the Membrane Innovation Lab, studying physicochemical and biological processes with emphases on advanced membrane processes and nanotechnology. Dr. Mi's recent achievements include an NSF CAREER Award and invited speaker at the US NAE Frontiers of Engineering Symposium.



**报告摘要:** Recent advances in two-dimensional (2D) nanomaterials offer unprecedented opportunities to fabricate a new class of materials that can potentially revolutionize desalination technology. In this talk, I will first discuss the promise of using 2D nanomaterials (e.g., graphene oxide/GO and MoS<sub>2</sub>) as building blocks to make new nanostructured membranes with exceptional physical, chemical, and biological properties. The interlayer spacing of such 2D-stacked membranes plays a critical role in the water transport and membrane separation performance. Our recent efforts in characterization and control of membrane interlayer spacing and understanding of water structure and transport in the 2D nanochannels will be presented. Next, as a broadband solar light absorber, GO can be used to efficiently absorb solar light and localize the heat to enable fast water evaporation. I will introduce our recent study on developing a synthetic GO leaf and solar-powered artificial tree for desalination. The potential of the artificial tree for treating high salinity water will be discussed with a focus on achieving zero liquid discharge (ZLD).

环境与资源学院环境过程研究所

2018 年 5 月 15 日