



### Seminar

## The Future of Electrochemistry

**Yang Shao-Horn**

*Massachusetts Institute of Technology*



**Time: 10:00am, Oct. 17, 2017 (Tuesday)**

**时间: 2017年10月17日 (周二) 上午10:00**

**Venue: Room W563, Physics building, Peking University**

**地点: 北京大学物理楼, 西563会议室**

### Abstract

Electrochemistry is used widely today, spanning from production of hydrogen and metals such as aluminum and Li-ion batteries. We will discuss current and future opportunities in using electrochemistry to power cars and buildings, and to make chemicals and fuels with energy from the Sun. Design principles in controlling the interactions between surfaces and electrolytes, and ion conduction in the electrolyte, central to the functions of electrochemical devices, will be presented.

### About the speaker

Professor Yang Shao-Horn is W.M. Keck Professor of Energy at the Massachusetts Institute of Technology. She has published 240+ archival journal papers (Thomson Reuters Highly Cited Researcher). Professor Shao-Horn's leadership and service contributions include: Co-Director for Center for Energy Storage at MIT; Energy Area Head, MIT Mechanical Engineering, National Science Foundation MRSEC Interdisciplinary Research Group Leader and MIT Presidential Energy Research Council. Moreover, Professor Shao-Horn has received honors recognizing her teaching/mentoring and research contributions, including the Charles Tobias Young Investigator Award from the Electrochemical Society, the Tajima Prize from the International Society of Electrochemistry, the Research Award by the International Battery Materials Association, the Battery Research Award from the Electrochemical Society, Royal Society of Chemistry Fellow and AAAS Fellow. Her recent work is centered on understanding the electronic structure of solids on the activity for water splitting and the reactivity of oxide/electrolyte interface in Li-ion batteries, and lattice dynamics on ion conduction in solids.