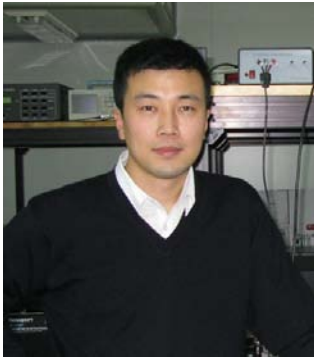




## 中心系列讲座 ICQM Weekly Seminar Series

# “Ultrasmall Silver Nanopores Fabricated by Femtosecond Laser Pulses”



**Prof. Jimin Zhao (赵继民)**  
Institute of Physics, CAS

**Time: 4:00pm, Sept. 14, 2011 (Wednesday)**

**时间: 2011年9月14日 (周三) 下午4:00**

**Venue: Room 607, Conference Room A, Science Building 5**

**地点: 理科五号楼607会议室**

### Abstract

It is fascinating when ultrafast meets with ultrasmall. Using femtosecond laser pulses we have fabricated 2nm-diameter individual silver nanopores. Furthermore the pore size can be controlled with appropriate choice of capping agent molecules. I will talk about how we have overcome the well-known optical diffraction limitation to fabricate these nanopores, which cannot be achieved so far by any of the current top-down technologies. As a result, we combined the advantages of two major fields of producing metallic nanostructures: ultrafast laser ablation and chemical reduction reaction. I will also address our microscopic physics mechanism and the potential applications, along with other structures fabricated with our method.

### About the Speaker

Jimin Zhao received his BS (in 1995) and MS (in 1998) degrees in physics from Tsinghua University and PhD degree in physics from the University of Michigan (Ann Arbor) in 2004. He joined the faculty as Associate Professor at the Institute of Physics, Chinese Academy of Sciences in 2007, where he is affiliated to the State Key Laboratory for Surface Physics. His current research is focused on ultrafast optical investigation of nanoscale structures, with an emphasis on the fabrication and nonlinear optical properties.