

Qing Li

Postdoctoral Research Associate
Center for Nanophase Materials Sciences
Oak Ridge National Laboratory
(865) 308-9380
liq1@ornl.gov



Education

Peking University	Physics	B. S., 2003
Institute of Physics, CAS	Physics	Ph. D., 2009

Professional Experience

2010–present	Postdoctoral Research Associate, Center for Nanophase Materials Sciences, ORNL
2005–2009	Visiting Student, Institute for Solid State Physics, University of Tokyo, Japan.

Publications (Over 14 articles and oral presentations)

Research Synopsis

1. *Atomic and Electronic Structures of Si Based Surfaces*

Scanning tunneling microscopy and spectroscopy are used to examine the lattice and electronic structures of Ag/Si(111) and In/Si(111) surface.

2. *Relation between Surface State and Kondo Effect*

We give a direct evidence of the surface state contribution to the Kondo effect via low temperature scanning tunneling microscopy study on a unique TBrPP-Co/Ag/Si(111) system.

3. *Surface State Assisted Surface Phonon Excitation on Metal Surface*

Using the inelastic electron tunneling spectroscopy (IETS) technique, we turn out that surface phonon. Excitation is assisted by the surface state using the inelastic electron tunneling spectroscopy (IETS) technique.

4. *Molecular Adsorption, Assembly, Reaction and Polymerization on Metal Surfaces*

We studied the adsorption, self-assembly, surface reaction as well as the low temperature polymerization of Phenylacetylene molecules on Au(111) and Cu(100) surface.

5. *STM/S Study of the doped CVD Graphene*

Nitrogen and boron doped CVD graphene are studied using scanning tunneling microscopy and spectroscopy. New types of dopants are observed in the atomically resolved image. Unique electronic structure is derived nearby the dopants, in good agreement with the theoretical calculations.

6. *Iron Based Superconductivity (FeTe_{0.55}Se_{0.45})*

We give the direct evidence of the relation between lattice distortion and superconductivity in Unconventional Superconductor FeTe_{0.55}Se_{0.45}.