

**Chinese Academy of Sciences and the University of Cambridge
Workshop on Novel Materials for Sustainable Energies of the Future
July 28 – 31, 2009**

Tuesday July 28

7.00pm Buffet reception at Trinity College (in the Old Kitchen)

Wednesday July 29

**Lectures will be held in the Debating Chamber, Cambridge Union Society,
9a Bridge Street, Cambridge (behind the Round Church)**

8.50 Introductory comments by Enge Wang and Tony Cheetham

Session 1: Chair – Tony Cheetham

9.00 Lindsay Greer - Recent developments in metallic glasses

9.30 Weihua Wang - Unique properties of new rare-earth-based bulk metallic glasses

10.00 Harry Bhadeshia - High performance, nanostructured steels

10.30 Coffee

Session 2: Chair – Ram Seshadri

11.00 Hong Ding - Probing novel superconductors through photoelectrons

11.30 Suchitra Sebastian - Fermi surfaces of unconventional superconductors

12.00 Xuejie Huang - Materials for Li-ion batteries

12.30 Lunch (Sidney Sussex College)

Session 3: Chair – Enge Wang

2.00 Richard Friend - Electronic excitations at polymeric semiconductor heterointerfaces

2.30 Jianguo Hou - Study of molecules on surfaces with STM

3.00 Henning Sirringhaus - Charge transport physics of organic semiconductors

3.30 Tea

Session 4: Chair – Hong Ding

4.00 Wenjie Liang - Thermoelectric properties of lead chalcogenide nanowires

4.30 Clare Grey - Following local structure changes in battery and fuel cell materials

Thursday July 30

Session 5: Chair - Xincheng Xie

- 9.00 Mike Payne - The future of first principles quantum mechanical simulations
- 9.30 Tao Xiang - Second renormalization group method and its application in quantum spin systems
- 10.00 Zhong Fang - LDA+Gutzwiller method for correlated electron systems
- 10.30 Coffee

Session 6: Chair – Richard Friend

- 11.00 Shobo Bhattacharya - Optically tweezing soft matter interfaces
- 11.30 Enge Wang - What controls the evolution of surface based nanostructures?
- 12.00 Malte Grosche - Tunability and self-organisation in quantum matter
- 12.30 Lunch (Sidney Sussex College)

Session 7: Chair – Hongjun Gao

- 2.00 Tony Cheetham - Properties of inorganic-organic framework materials
- 2.30 Song Gao - Strategies towards single chain magnets
- 3.00 Andrew Goodwin - Flexibility in framework materials
- 3.30 Tea

Session 8: Chair – Henning Sirringhaus

- 4.00 Shiwu Gao - Semiclassical approach to plasmonic damping in low-D systems
- 4.30 Hongxing Xu - Light manipulation in the nanometer scale via nanoplasmonics
- 7.00 Reception followed by dinner at Christ's College (Old Combination Room)

Friday July 31

Session 9: Chair – Clare Grey

- 9.00 Colin Humphreys -Recent advances on GaN LEDs for solid state lighting
- 9.30 Yongqing Li - Some spin phenomena in the quantum Hall regime
- 10.00 Ram Seshadri - Phosphors for solid state lighting
- 10.30 Coffee

Session 10: Chair – Montu Saxena

- 11.00 Hongjun Gao - Site specific adsorption and ordered array formation of polar molecules on a graphene Moiré superstructure
- 11.30 Xincheng Xie - Dephasing and disorder effects in topological insulator
- 12.00 Wrap-up discussion followed by lunch (Sidney Sussex College)