

ARO workshop on “Surface Plasmons, Metamaterials, and Catalysis” at
Rice University

BioScience Research Collaborative Building, Lecture Room 280

October 21-23, 2013

PROGRAM

Monday, October 21, 2013

Conferees/Speakers arrive

18:00 **Welcome reception**

Talk Session 1 - Chair: Doug Natelson

20:00 *Welcome Isabell Thomann*

20:15 Talk 1: *Rick Van Duyne* “SERS and TERS for Catalysis”

20:45 Talk 2: *Paul Bohn* “Coupled Plasmonics, Transport and Catalysis in 0-D and 1-D Nanofluidic Structures”

21:15 Talk 3: *Jennifer Dionne* “In-situ, single particle studies of heterogeneous catalysis”

21:45 End of Monday's program

Tuesday, October 22, 2013

8:00 **Breakfast**

Talk Session 2 - Chair: Peter Nordlander

09:00 Talk 4: *Harry Atwater* “Quantum Informatics and Electrochemical Potential Control with Plasmons”

09:30 Talk 5: *Mengyan Shen* “Photosynthesis with metal nanostructures”

10:00 Talk 6: *John Yates* “Watching Hot Carriers in TiO₂ Excited by UV Radiation”

10:30 Coffee break

11:00 Talk 7: *Mark Brongersma* “Nanophotonics-enhanced solar fuel generation”

11:30 Talk 8: *Michael Filler* “Enhanced LSPR Absorption from Dielectric Anisotropy in Si Nanowires”

11:45 Talk 9: *Isabell Thomann* “Ultrafast Spectroscopy and Nanophotonics for Photocatalysis”

12:00 **Lunch**

Talk Session 3 - Chair: Naomi Halas

13:30 Talk 10: *Wei-Shun Chang* “One-Photon Luminescence as a Potential Probe of Hot Electrons”

13:45 Talk 11: *Phillip Christopher* “Resonant heterogeneous photocatalysis enabled by nanoscale effects”

14:00 Talk 12: *Joseph Herzog* “Anomalous Polarization Dependence of Surfaced Enhanced Raman Spectroscopy in Nanojunctions due to Dark plasmons”

14:15 Talk 13: *Alexander Govorov* “Photo-injection of hot plasmonic carriers from metal nanocrystals”

14:30 Talk 14: *Steve Cronin* "Plasmon-Enhanced Photocatalysis for Water Splitting and CO₂ Reduction"

15:00 Coffee break (30 minutes)

Talk Session 4 - Chair: Vladimiro Mujica

15:30 Talk 15: *Michael Wong* "Developing the Reduction Properties of Photocatalysts"

15:45 Talk 16: *Christy Landes* "Single Particle Surface Plasmon Nanoelectrochemical sensors"

16:00 Talk 17: *Suljo Linic* "Conversion of solar into chemical energy on plasmonic metal nanostructures"

16:30 Talk 18: *George Schatz* "Modeling active plasmonic response"

17:00 End of Session 4

17:00 Poster + Reception

18:00 Dinner

Wednesday, October 23, 2013

8:00 Breakfast

Talk Session 5 - Chair: Isabell Thomann

09:00 Talk 19: *Mostafa El-Sayed* "Some plasmonic applications in nanocatalysis and nanomedicine"

09:30 Talk 20: *Katherine Willets* "Super-resolution imaging of plasmonic nanostructures"

10:00 Talk 21: *Yuebing Zheng* "Surface-Enhanced Raman Spectroscopy to Probe Photoreaction of Isolated Reactants in Well-Defined Nanoscale Environments"

10:15 Talk 22: *Peter Nordlander* "Highly Efficient Room Temperature Photodissociation of H₂ on Au"

10:30 Coffee break

11:00 Discussion

12:00 Lunch

Talk Session 6 - Chair: Nicolas Large

14:00 Talk 23: *Martin Moskovits* "Photochemistry and photovoltaics based on plasmonically-generated hot electrons"

14:30 Talk 24: *Maxim Sukharev* "Transient spectroscopy of hybrid materials: ultra-fast energy transfer between surface plasmons and molecular aggregates"

14:45 Talk 25: *Vladimiro Mujica* "Molecular Chiral Effects in Interfacial Electron Transfer"

15:00 Talk 26: *Alessandro Alabastri* "Molding of plasmonic resonances: a non-linear temperature dependent permittivity model"

15:15 – 15:30 Concluding Remarks/ End of Workshop