

Physical Electronics Conference 2008
Sunday, June 22nd – Wednesday, June 25th, 2008
University of California, Riverside USA

SCHEDULE

Note: All oral presentations will be held in Engineering Building Unit II, Room 138 (EBU II 138). Lunches, exhibitions, and poster sessions will be in EBU II 205/206. The welcome reception and early registration are in the UCR Pentland Hills Bear Cave. Breakfast is provided with your Pentland Hills room charge, or it can be purchased, at the Lothian cafeteria.

Sunday, June 22, 2008 – UCR Pentland Hills Bear Cave

12:00 noon – 8:00 pm **Room check in and conference registration;
Refreshments provided.**

5:00 – 8:00 pm **Welcome Reception**

Monday, June 23, 2008 – Engineering Building Unit II

8:00 – 10:00 am **Exhibitor set up (EBU II 205/206)**

8:00 – 8:30 am **Registration (EBU II 138)**

Session 1: 8:30 – 10:00 am (EBU II 138) – Jory A. Yarmoff

8:30 – 8:40 am **Welcome and Opening Remarks**

8:40 – 9:20 am **J. C. Séamus Davis**, Cornell University, Invited Speaker –
Atomic-scale visualization of complex electronic matter

9:20 – 9:40 am **O1. Inversion of ferromagnetic proximity polarization in GaAs by
MgO interlays** – R. K. Kawakami, University of California,
Riverside

9:40 – 10:00 am **O2. Effect of semiconductor interface band structure on hot-
electron transport in metals** – V. P. LaBella, University of Albany

10:00 – 10:20 am **Break (EBU II 205/206)**

Session 2: 10:20 – 12:20 pm (EBU II 138) – William A. Goddard III

10:20 – 10:40 am **O3. Quantum transport of charges in graphene** – C. N. Lau,
University of California, Riverside

10:40 – 11:00 am **O4. Charged impurities slow down electrons in graphene** –
J. H. Chen, University of Maryland

11:00 – 11:20 am **O5. Spectroscopic studies of electronic inhomogeneities in
epitaxial graphene on SiC(0001)** – N. Sharma, Georgia Institute of
Technology

11:20 – 11:40 am	O6. <i>The evolution of the electronics structure from doped graphene to bulk graphite intercalation compounds</i> – J. L. McChesney, Lawrence Berkeley National Laboratory
11:40 – 12:00 pm	O7. <i>Thermal stability of mass selected silver clusters softlanded on C₆₀ films</i> – C. Yin, Universität Freiburg
12:00 – 12:20 pm	O8. <i>Buffer layer assisted growth of metal nanoparticles on self-assembled monolayers for a study of chemical enhancement factor of SERS</i> – M. Maitani, Pennsylvania State University
12:20 – 1:50 pm	Lunch Break (EBU II 205/206)
Session 3: 1:50 – 3:50 pm (EBU II 138) – Ludwig Bartels	
1:50 – 2:10 pm	O9. <i>Lithographically patterned nanowire electrodeposition</i> – C. Xiang, University of California, Irvine
2:10 – 2:30 pm	O10. <i>Plasmon excitations in silver nanowires and nanoclusters</i> – R. L. Kurtz, Louisiana State University
2:30 – 2:50 pm	O11. <i>Rapid diffusion of magic-size islands by combined glide and vacancy mechanisms</i> – O. U. Uche, Sandia National Laboratories
2:50 – 3:10 pm	O12. <i>Facile Kinetics of Bilayer “Quantum Island” Formation at Low Temperature: Ag/NiAl(110)</i> – Y. Han, Iowa State University
3:10 – 3:30 pm	O13. <i>Adatom diffusion on a screw dislocation</i> – G. Antczak, University of Illinois at Urbana-Champaign
3:30 – 3:50 pm	O14. <i>Substrate dependence of the molecular organization of self-assembled octadecanethiolate monolayers on the bare semiconductor (111), (110) and (001) faces of GaAs</i> – C. L. McGuinness, Pennsylvania State University
4:00 – 6:00 pm	Vendor Exhibit and Poster Session (EBU II 205/206)
6:00 – 8:00 pm	Picnic and BBQ (UCR Botanic Gardens)
8:00 – 9:00 pm	Vendor Exhibit and Poster Session (EBU II 205/206)

Tuesday, June 24, 2008 – Engineering Building Unit II

Nottingham Session 1: 8:00 – 10:00 am (EBU II 138) – Harry Tom

8:00 – 8:20 am	N1. <i>Novel transparent conducting oxides—towards transparent Interconnects</i> – N. Cortes, Northwestern University
8:20 – 8:40 am	N2. <i>The Dependence of band structure on strain in Si nanomembranes</i> – C. Euaruksakul, University of Wisconsin-Madison

8:40 – 9:00 am	N3. <i>Metal / polymer interfaces in photovoltaics: Ca on polyfluorenes</i> – J. Farmer, University of Washington
9:00 – 9:20 am	N4. <i>An electronic single molecule sensor using carbon nanotube wiring</i> – B. R. Goldsmith, University of California, Irvine
9:20 – 9:40 am	N5. <i>Elucidating the structure of epitaxial graphene on SiC: Surface x-ray diffraction and scanning tunneling microscopy studies</i> – J. Hass, Georgia Institute of Technology
9:40 – 10:00 am	N6. <i>Activated and nonactivated water desorption from polymer surfaces</i> – C. C. Ilie, University of Nebraska at Lincoln
10:00 – 10:20 am	Break (EBU II 205/206)
Nottingham Session 2: 10:20 am – 12:20 pm (EBU II 138) – Carol Hirschmugl	
10:20 – 10:40 am	N7. <i>Optical and electrical characterization of graphene-based material</i> – I. Jung, The University of Texas at Austin
10:40 – 11:00 am	N8. <i>New atomic-scale insight into molybdenum sulfide nanostructures investigated by STM</i> – J. Kibsgaard, University of Aarhus
11:00 – 11:20 am	N9. <i>Morphological changes of NiAl(111) induced by oxygen</i> – E. Loginova, Rutgers
11:20 – 11:40 am	N10. <i>Atomic scale patterning with reconstruction domain boundaries</i> – A. G. Mark, Queen's University
11:40 – 12:00 pm	N11. <i>Metal Induced Gap States on Pt modified Ge(001) Surfaces</i> – N. Oncel, Princeton University
12:00 – 12:20 pm	N12. <i>Molecular diffusion, energetics, and structures on Cu(111) as studied by scanning tunneling microscopy</i> – G. Pawin, University of California, Riverside
12:20 – 1:40 pm	Lunch Break (EBU II 205/206)
Session 4: 1:40 – 3:20 pm (EBU II 138) – Jane Chang	
1:40 – 2:20 pm	Rasmita Raval , University of Liverpool, Invited Speaker – <i>Chiral surfaces: From nanoscale events to macroscale mirror symmetry breaking</i>
2:20 – 2:40 pm	O15. <i>Spatially resolved organizational structure and electronic signatures of weakly surface bound chiral domains</i> – T. P. Pearl, North Carolina State University
2:40 – 3:00 pm	O16. <i>Peptide affinities for Au and SiO₂ surfaces</i> – D. Y. Petrovykh, University of Maryland
3:00 – 3:20 pm	O17. <i>A quantitative single-molecule analysis of thioether rotors</i> – E. C. H. Sykes, Tufts University

3:20 – 3:40 pm

Break (EBU II 205/206)

Nottingham Session 3: 3:40 – 5:40 pm (EBU II 138) – Robert Bartynski

3:40 – 4:00 pm

N13. *Electronic properties of epitaxial graphene at the atomic scale* – G. M. Rutter, Georgia Institute of Technology

4:00 – 4:20 pm

N14. *Surface structure and Fermi level determination of oxides/III-V interface* – J. Shen, University of California, San Diego

4:20 – 4:40 pm

N15. *Structural understanding of self-assembled disilicide nanowires via scanning probe microscopy and first principles studies* – A. Shinde, University of California, Irvine

4:40 – 5:00 pm

N16. *Three-dimensional concentration profiles at surfaces measured using LEEM* – J. Sun, University of New Hampshire

5:00 – 5:20 pm

N17. *Orientational structure of water molecules near the solid/water interface probed with second harmonic generation* – P. Wan, University of California, Riverside

5:20 – 5:40 pm

N18. *Interface induced spin and dipole ordering of the copper spin-1/2 molecule: bis(4-cyano-2,2,6,6-tetramethyl-3,5-heptanedionato)copper(II)* – D. Wisbey, University of Nebraska-Lincoln

7:00 – 9:00 pm

Banquet – Historic Mission Inn, Downtown Riverside

Wednesday, June 25, 2008 – Engineering Building Unit II

Session 5: 8:00 – 10:00 am (EBU II 138) – Francisco Zaera

8:00 – 8:20 am

O18. *Damage-free fabrication of semiconductor devices using electron enhanced etching: Experiment and simulation* – H.P. Gillis, University of California, Los Angeles

8:20 – 8:40 am

O19. *Bilayer processing for an enhanced organic-electrode contact in ultrathin bottom contact organic transistors* – J. Park, University of California, San Diego

8:40 – 9:00 am

O20. *Hydrogen sensitive reversible conductance observed in polymer nanostructures* – A. Laracuenta, Naval Research Laboratory

9:00 – 9:20 am

O21. *Electronic energy level alignment in dye sensitized oxide surfaces* – S. Rangan, Rutgers

9:20 – 9:40 am

O22. *Extraordinary oxidation of NiSi/Si(100) by atomic oxygen* – J. A. Kelber, University of North Texas

9:40 – 10:00 am

O23. *Controlled reactivity at the atomic scale revealed in the interaction of NH₃ with H/Si(111) surfaces* – M. D. Halls, Accelrys, Inc.

10:00 – 10:20 am **Break (EBU II 205/206)**

Session 6: 10:20 am – 12:20 pm (EBU II 138) – Andrew C. Kummel

10:20 – 10:40 am O24. *Surface reaction of tert-butanol on Si(100): Ligand of metal-organic precursor for high- κ thin film growth* – T.-L. Chen, Columbia University

10:40 – 11:00 am O25. *Hydrophilicity transition at the clean rutile (110) surface* – D. Hennessy, Argonne National Laboratory

11:00 – 11:20 am O26. *Reduction of cationic Sn in SnO_x/PtSn alloy surfaces* – G. F. Liu, Lehigh University

11:20 – 11:40 am O27. *Structure of the polar oxide surface MgO(111) ($\sqrt{3}\times\sqrt{3}$)R30°* – S. F. Chamberlin, University of Wisconsin-Milwaukee

11:40 – 12:00 pm O28. *Phosphorus diffusion and strain in GaAsP/GaAs heterostructures* – W. J. Chang, Michigan State University

12:00 – 12:20 pm O29. *Solution to the phase problem for surface x-ray diffraction* – P. F. Lyman, University of Wisconsin-Milwaukee

12:20 pm Closing Comments

12:20 – 2:00 pm **Lunch and departure (EBU II 205/206)**

2:00 – 5:00 pm **Lab Tours**

Physical Electronics Conference 2008 Posters

No.	Presenter	Institution	Title
P1	Albiter, M. A.	University of California, Riverside	<i>Characterization by IR CO titration and activity for trans-2-butene conversion of Pt (PAMAM dendrimer encapsulated)/ silica sol-gel catalysts</i>
P2	Arjad, A.	University of California, Riverside	<i>Growth of Ag nanoclusters on amorphous SiO₂</i>
P3	Baber, A. E.	Tufts University	<i>Resolving the electronic properties of catalytically important Pd/Au alloys at the sub-nanometer level</i>
P4	Balaz, S.	University of California, Riverside	<i>Ion scattering from Au nanoclusters formed by buffer layer assisted growth</i>
P5	Chagarov, E.	University of California, San Diego	<i>Density-functional theory molecular dynamics simulations of a-Al₂O₃/Ge(100)(2x1), a-ZrO₂/Ge(100)(2x1), a-Al₂O₃/InGaAs, and a-Al₂O₃/InAlAs/InGaAs</i>
P6	Chang, K.-C.	Argonne National Laboratory	<i>In situ surface sensitive studies of high temperature solid oxide fuel cell cathode materials</i>
P7	Cheng, Z.	University of California, Riverside	<i>Adsorption structures of hexabenz[a,d,g,j,m,p]coronene on Cu(111): An STM study</i>
P8	Gann, R. D.	University of California, Riverside	<i>Surface structure of Bi₂Sr₂CaCu₂O_{8+δ} studied by low-energy ion scattering</i>
P9	Iski, E. V.	Tufts University	<i>AgCl monolayers on Au(111): Novel, ultra-stable and atomically-flat surfaces</i>
P10	Jewell, A.	Tufts University	<i>A novel self-assembly scheme derived from thioethers</i>
P11	Kang, B.-C.	University of California, Riverside	<i>Development of new instrumentation for the investigation of film growth in situ using infrared spectroscopy</i>
P12	Khalap, V.	University of California, Irvine	<i>Hydrogen sensing properties of carbon nanotube circuits incorporating Pd-decorated defects</i>
P13	King, S. T.	University of Wisconsin-Milwaukee	<i>Observation of a ($\sqrt{3} \times \sqrt{3}$)R30° reconstruction on O-Polar ZnO surfaces</i>

P14	Lee, I.	University of California, Riverside	<i>Selectivity change in cis-trans carbon double bond isomerization by changes in olefin substituents and in surface structure</i>
P15	Lee, J. S.	University of California, San Diego	<i>Studies of plasma nitridation of Ge(100) by scanning tunneling microscopy</i>
P16	Lin, K. C.	Fu Jen Catholic University	<i>Surface morphology and micro-photoluminescence of phase-separated MEH-PPV/PS polymer blends</i>
P17	Liu, X. F.	University of California, Riverside	<i>Ferromagnetism of (110)-oriented manganite interface</i>
P18	Ma, Q.	University of California, Riverside	<i>Surface chemistry of the atomic layer deposition of copper films on a Ni(110) surface</i>
P19	Oncel, N.	Princeton University	<i>A Scanning tunneling microscopy study of Ni and Pt octaethyl porphyrin at the solid liquid interface</i>
P20	Pai, W. W.	National Taiwan University	<i>Potassium induced long-range ordered superstructure and fractal island growth on C₆₀/Ag(111) surface</i>
P21	Reichenbach, B.	University of New Mexico	<i>A field evaporation deuterium ion source for neutron generators</i>
P22	Royer, J. E.	University of California, San Diego	<i>Isolation of aging components in organic transistors</i>
P23	Seo, S.	University of Wisconsin, Madison	<i>Molecular-scale structural distortion near vacancies in pentacene</i>
P24	Tao Song	University of California, San Diego	<i>Passivation of As vs. In/Ga rich In_{0.5}Ga_{0.5}As(001) by OH, H and Cl</i>
P25	Tan, X.	University of California, Riverside	<i>Investigation of Fe/MgO interface by second harmonic generation</i>
P26	Tao, Feng	Lawrence Berkeley National Laboratory, and UC Berkeley	<i>A new scanning tunneling microscope reactor used for high pressure and high temperature catalysis studies</i>
P27	Tierney, H. L.	Tufts University	<i>Atomic-scale imaging and electronic structure determination of catalytic sites on Pd/Cu near surface alloys</i>

P28	Ventrice Jr., C. A.	Texas State University	<i>Ultra-violet photoelectron spectroscopy study of epitaxial $\text{La}_2\text{NiMnO}_6$ and $\text{La}_2\text{CoMnO}_6$ films grown on $\text{SrTiO}_3(100)$</i>
P29	Wong, J. J.	University of California, Riverside	<i>Role of oxygen content on the interlayer exchange coupling in $\text{Co/Fe/MgO/Fe}(001)$</i>
P30	Zirmi, R.	University of Mouloud, Algeria	<i>Nickel Silicide formation with Nickel deposit on Silicon by electrochemical way and effect of ultrasounds in the Silicide qualities</i>