

Murray S. Daw -- Presentations

3 May 2016

(i = invited talk)

1/81 Eighth Annual Conference on the Physics of Compound
Semiconductor Interfaces, Williamsburgh

"Surface Core Excitons in III-V Semiconductors"

1/81 Eighth Annual Conference on the Physics of Compound
Semiconductor Interfaces, Williamsburgh

"Surface Vacancies in II-VI and III-V Zincblende
Semiconductors"

3/81 APS Solid State Division Conference, Phoenix

"Fano Resonances in Semiconductor Surface Core Excitons"

5/81 Xerox Research Lab, Palo Alto

"The Defect Model of Schottky Barrier Formation"

i 6/82 Third International Conference on Hydrogen and
Materials, Paris, France

"Hydrogen Trapping in Metals"

i 6/82 Symposium at the KFA, Julich, Germany

"Hydrogen Trapping in Metals"

i 6/82 University of Odense, Denmark

"Hydrogen Trapping in Metals"

i 10/82 TMS-AIME Fall Meeting, St. Louis, Missouri

"Theory of Hydrogen Embrittlement"

3/83 Solid/Liquid Storage Review, Los Alamos

"Hydrogen and Helium in Pd"

- 3/83 High-Power Microwave Technology Conference, Harry
Diamond Laboratory, Maryland
"High-Power Microwave Breakdown in Semiconductors"
- 6/83 Vineyard Review, Livermore
- 4/84 High-Temperature Alloys: Theory and Design, Bethesda
"Embedded Atom Theory of Metal Alloys"
- i 4/84 Materials Science/Physics Colloquium, University of Utah
"Hydrogen Embrittlement"
- i 6/84 Sandia National Laboratories in Albuquerque, Solid State
Group Seminar
"Hydrogen in Metals"
- i 7/84 Oak Ridge National Laboratory, Solid State Division Seminar
"Hydrogen on Pd(111)"
- i 8/84 UC Berkeley/LBNL Joint Surface Science Seminar
"Hydrogen on Pd(111)"
- i 11/84 MIT Materials Group Symposium
"Hydrogen Embrittlement"
- i 11/84 MRS Fall Meeting, Boston
"Atomistic Theory of Hydrogen Embrittlement: Embedded
Atom Method"
- i 1/85 West Coast Theoretical Chemistry Conference, Livermore
"The Molecular Dynamics of Hydrogen on Transition Metal
Surfaces: Order-Disorder Transformations"
- i 7/85 Gordon Conference on Hydrogen in Metals, NH
"Theory of Hydrogen on Transition Metal Surfaces"

- i 6/85 Keynote address at International Conference on Fundamentals of Fracture, Gatlinburg
"Mechanical Properties from Atomistic Simulations"

- 8/85 32nd National AVS Symposium, Houston, Texas
"Calculations of the Energetics and Structure of Pt(110) Using the Embedded Atom Method"

- i 6/86 Surface Science Seminar, Free University of Berlin
"Reconstruction of Pt and Au(110)"

- i 6/86 NATO Workshop on the Physics and Chemistry of Fracture, Bad Reichenhall, Germany
"Hydrogen Embrittlement of Metals"

- 8/86 Northern California Chapter of AVS
"Reconstruction of Pt(110) Using the Embedded Atom Method"

- i 9/86 Materials Science Department Seminar, U. of Minnesota
"Hydrogen Embrittlement of Metals"

- i 2/87 Special Symposium on Crack Tip Plasticity, Spring Meeting of the Metallurgical Society, Denver
"Atomistic Simulation of Fracture"

- i 3/87 National Research Council, Materials Advisory Board, La Jolla Workshop on "Advanced Computation and Simulation of Complex Materials Phenomena"

- i 4/87 Surface Science and Catalysis Science Seminar, LBNL
"Reconstruction of Au and Pt(110)"

- i 5/87 General Science Seminar at Xerox Research, Palo Alto
"Reconstruction of Au and Pt(110)"

- i 6/87 Bell Labs, Solid State Symposium, Murray Hill

"Embedded Atom Method"

- i 6/87 2nd International Conference on Structure of Surfaces,
Amsterdam
"Calculations of Structure and Dynamics of Transition Metal
Surfaces Using the Embedded Atom Method"

- 8/87 EAM Workshop-I, Livermore

- i 10/87 BES Task Force on Nickel Aluminides
"Metallic Alloys"

- i 12/87 Rice University Materials Department, Houston
"Calculation of Mechanical Properties of Metals Using the
Embedded Atom Method"

- i 1/88 Physics Department Seminar, UC Davis
"Surface Phonon Calculations with the Embedded Atom Method"

- i 2/88 UC Berkeley, Solid State Physics Colloquium
"Calculation of Surface Structure and Dynamics Using the
Embedded Atom Method"

- i 9/88 World Materials Congress, Chicago
"Embedded Atom Method: Many-Atom Description of Metallic
Bonding"

- 10/88 AVS Annual Meeting, Atlanta
"Surface Phonons on Cu(100) and Cu(111)"

- i 7/89 Many-Atom Interactions in Solids, an International
Workshop, Pajulahti, Finland
"Embedded Atom Method: Many-Atom Description of
Metallic Cohesion"

- i 7/89 Solid State Seminar, Sandia Albuquerque
"Structure of Grain Boundaries in Aluminum"

- i 11/89 Physics Colloquium, UC Davis
"Small Metal Clusters on Metal Surfaces"

- 7/90 Physical Electronics Conference, Gaithersburg
"Small Metal Clusters on Metal Surfaces"

- i 8/90 Solid State Colloquium, Oak Ridge National Labs
"Structure of Grain Boundaries in Aluminum"

- i 9/90 Surface Science Seminar, LBL/UC Berkeley
"Small Metal Clusters on Metal Surfaces"

- i 10/90 TMS-AIME Fall Meeting, Special Symposium (presented by
S. Foiles)

- i 4/91 Physics Colloquium, U. Florida
"Atomistic Studies in Materials Physics"

- i 5/91 International Workshop on Radiation Effects, La Jolla
"Embedded Atom Method"

- i 7/91 NATO Advanced Study Institute on Surfaces and Interfaces,
Greece
"Atomistic Properties of Interfaces" (presented by S. Foiles)

- i 9/91 DOE/BES Workshop on Intermetallics, La Jolla
"Theoretical Work on Intermetallics"

- i 10/91 DOE/BES Workshop on Theory of Materials, Williamsburg
"Atomistic Calculations of Materials Properties"

- i 11/91 Washington U. Physics Department Colloquium, St. Louis
"Calculations of Grain Boundary Structure"

- i 1/92 Clemson University, Physics Dept.
"Grain boundary structure in metals"

- i 1/92 NC State Joint Physics/Materials Colloquium, Raleigh
"Calculations of Grain Boundary Structure"

- 5/92 MRS Spring Meeting
"Tight-Binding Study of Many-Body Potentials for BCC
Transition Metals"

- i 8/92 IMS Special Symposium, Denver
"Atomistic Calculations of Grain Boundary Structure"

- i 11/92 MRS Fall Meeting
"Using the Density Matrix For Atomistic Simulations"

- i 1/93 Princeton Materials Institute
"Atomistic Calculations in Materials Science"

- i 1/93 Brookhaven National Labs
"Electronic Structure Calculations of Large Systems"

- i 1/93 Lawrence Livermore Labs
"Electronic Structure Calculations of Large Systems"

- i 1/93 Stanford U., Materials Science Dept.
"Atomistic Calculations in Materials Science"

- i 1/93 Oak Ridge National Labs
"Atomistic Calculations in Materials Science"

- i 1/93 Georgia Tech, Physics Dept
"Electronic Structure Calculations of Large Systems"

- i 3/93 U. of Illinois, Materials Science Dept.

"Atomistic Calculations in Materials Science"

- i 4/93 U. of Minnesota, Materials Science Dept.
"Electronic Structure Calculations of Large Systems"
- i 5/93 Briefing for Dr. W. Happer, Director of Energy Research, DOE
"Contributions of atomic-scale calculations to Materials Science"
- i 6/93 Princeton University, Princeton Materials Institute
"Theoretical Investigation of the Mechanical Properties of Intermetallics"
- 9/93 Electronic Structure of Solids/Greece
"An O(N) electronic structure algorithm based on direct solution for the density matrix"
- i 9/93 Atomistic Simulation of Complex Systems/Germany
"An O(N) electronic structure algorithm based on direct solution for the density matrix"
- i 11/93 NC State, Materials Science Dept.
"Atomistic Calculations in Materials Science"
- i 11/93 Clemson U., Physics Dept.
"An O(N) electronic structure algorithm based on direct solution for the density matrix"
- i 11/93 Sandia National Labs, Albuquerque
"An O(N) electronic structure algorithm based on direct solution for the density matrix"
- i 2/94 Sanibel Symposium, Florida
"An O(N) electronic structure algorithm based on direct solution for the density matrix"

- i 12/95 Clemson U., Chemistry Dept.
"An $O(N)$ electronic structure algorithm based on direct solution for the density matrix"

- i 4/96 Wake Forest University, Physics Dept.
"Atomic-Scale Calculations of Dislocation Structure"

- i 5/96 Max Planck Institut, Stuttgart
"Dislocation Structure and Dynamics"

- i 5/96 Engineering Foundation Conference on Intermetallics
Davos, Switzerland
"Atomic-Scale Calculations of Dislocations"

- i 2/97 Auburn U., Physics Dept.
"How Things Bend"

- 3/97 APS March Meeting, Kansas City
"Pinning/Depinning Transition in Dislocation Dynamics"

- i 4/97 Clark Atlanta U., Center for Theoretical Studies
"How Things Bend"

- i 11/97 Computational Materials Workshop, Vanderbilt U.
"Dislocation Dynamics"

- i 2/98 Motorola Predictive Engineering Lab, Phoenix, NM
"Computational Materials Program"

- i 2/98 Los Alamos National Lab
"Dislocation Dynamics"

- 3/98 APS March Meeting
"Instabilities in Dislocation Dynamics"

- i 4/98 Motorola Applied R&D Lab, Austin, TX
"Backend Materials for Microelectronics"

- i 9/98 Society for Engineering Science, Pullman, WA
"Delayed Decomposition of Dislocations
in Intermetallic Alloys"

- i 1/99 Materials Science & Engineering Dept, Ohio State U
"Challenges for Computational Materials Science
in the Microelectronics Industry"

- i 3/00 APS March Meeting
"Stress effects on dopant diffusion in Si"

- i 4/00 MRS Spring Meeting
"Stress effects on dopant diffusion in Si"

- i 11/01 UC Berkeley, Materials Science Departmental Colloquium
"A random walk through the diffusion field"

- 12/02 MRS Fall Meeting
"Point Defect Diffusion in Intermetallics"

- 4/02 TMS National Conference, San Diego
"Point Defect Diffusion in Intermetallics"

- i 1/03 Seminar, Center for Simulation, UGa
"A random walk through the field of diffusion"

- 4/03 TMS National Conference, Charlotte
"First-principles calculations of the screw dislocation in Fe"

- i 4/05 MRS Spring Conference, San Francisco
"Simulating diffusion-limited processes in
intermetallics"

- 2/06 Materials Seminar, UNT
"Simulating diffusion-limited processes in intermetallics"
- i 9/06 European MRS, Warsaw, Poland
"Simulating diffusion-limited processes in intermetallics"
- 2/07 TMS Annual Meeting, Orlando
"Diffusion in Ordered Intermetallics by Accelerated MD"
- 2/07 TMS Annual Meeting, Orlando
"Scaling in Dislocation Dynamics"
- 2/07 TMS Annual Meeting, Orlando
(co-author) "Dislocations on Carbon Nanotubes"
- 3/07 APS March Meeting
(co-author) "MoS₂ Nanotubes"
- 3/07 APS March Meeting
(co-author) "Diffusion in Intermetallic Alloys"
- 3/07 APS March Meeting
(co-author) "Effects of Disorder in (Pb,Sn)Te"
- i 3/07 Clemson, Physics Colloquium
"Random Walk Through the Field of Diffusion"
- i 4/07 Pi Tau Sigma (Mechanical Engineering Honor Society)
Banquet Speaker
"How Should Engineers View Physics?"
- i 7/07 IAP Conference (Realism in Physics, U Notre Dame)
"Summary of Physical Concepts in the Realist Approach"

- i 11/07 MRS Fall Meeting
"Diffusion in Intermetallics using on-the-fly KMC"

- 11/07 MRS Fall Meeting
"Quantifying Microstructure of Nanocomposites"

- i 7/08 IAP Conference (Notre Dame)
"Realism in Physics"

- i 7/08 IAP Conference (Notre Dame)
"Teaching Realism"

- 8/08 ICT 2008
"Quantifying Microstructure of Nanocomposites"

- i 2/09 IAP Workshop for College Physics Teachers (Philadelphia)
"Physics for Realists"

- i 4/09 NASA-Ames
"Quantifying Microstructural Effects"

- i 3/09 St. Joe's High School Physics Classes
"Physics of Heat Conduction"

- i 4/09 St. Joe's High School Faith & Reason Class
"Science and Catholic Culture"

- i 7/09 IAP Conference (Notre Dame)
"Physics for Realists: Classical Mechanics"

- i 10/09 Physics Colloquium (Auburn University)
"Physics for Realists"

- i 10/09 Physics Colloquium (College of Charleston)
"Physics for Realists"

- i 11/09 Physics Colloquium (N Ga College & State University)
"Physics for Realists"
- i 11/09 Physics Colloquium (Wofford College)
"Physics for Realists"
- i 12/09 Faculty Colloquium (Ave Maria University)
"Physics for Realists"
- i 7/10 IAP Conference (Notre Dame)
"Physics for Realists: Electricity and Magnetism"
- i 4/11 SACS-AAPT Spring Meeting
"Workshop: Physics for Realists"
- i 7/11 IAP Conference (Notre Dame)
"Physics for Realists: Mechanics"
- i 4/12 Annual Meeting, Center for Simulational Physics (UGa)
"Dissipation from microscopic dynamics"
- i 7/12 IAP Conference (LSU)
"Physics for Realists: E&M"
- 8/12 DOE TCMP PI meeting
poster: "Improved Calculation of Vibrational Mode Lifetimes in Anharmonic Solids"
- i 2/13 Solid State Seminar, Wake Forest, Dept of Physics
"Improved Calculation of Vibrational Mode Lifetimes in Anharmonic Solids"
- i 2/13 Colloquium, Wake Forest, Dept of Physics
"Physics for Realists"
- i 2/13 Annual Workshop, UGa Center for Simulational Physics (Athens, GA)

"Improved Calculation of Vibrational Mode Lifetimes in Anharmonic Solids"

3/13 APS March Meeting (Baltimore, MD)

"Improved Calculation of Vibrational Mode Lifetimes in Anharmonic Solids"

i 7/13 IAP Conference (LSU)

"Physics for Realists: E&M"

i 7/13 IAP Conference (LSU)

"Entangled States in deBroglie-Bohm Dynamics"

i 2/14 TMS Special Symposium: 30 Years of EAM

"Calculating Vibrational Mode Lifetimes in Solids"

i 4/14 Solid State Seminar (Auburn)

"Calculating Vibrational Mode Lifetimes in Solids"

i 5/14 Solid State Seminar (Los Alamos)

"Calculating Vibrational Mode Lifetimes"

i 5/14 Physics Colloquium (Los Alamos)

"First Principles of Physics"

i 5/14 Solid State Seminar (Sandia Albuquerque)

"Calculating Vibrational Mode Lifetimes"

i 5/14 Special Seminar (Sandia Albuquerque)

"First Principles: Maintaining the Big Picture"

i 7/14 IAP Conference (LSU)

"Teaching from 'Physics for Realists'"

i 7/14 IAP Conference (LSU)

"Entangled States in deBroglie-Bohm Dynamics"

- i 8/14 PI Conference (DOE, Gaithersburg)
“Calculating Vibrational Mode Lifetimes”
- i 9/14 Materials Science Seminar (Mississippi State)
“Calculating Vibrational Mode Lifetimes”
- i 9/14 Special Colloquium (Mississippi State)
“First Principles: Maintaining the Big Picture”
- i 10/14 Special Presentation to Office of Economic Development (Clemson)
“First Principles: Maintaining the Big Picture”
- i 7/15 IAP Conference (LSU)
“Teaching from ‘Physics for Realists’”
- i 7/15 IAP Conference (LSU)
“Resonant Interaction of a Compton Dipole in a Cavity”
- i 2/16 EMA Conference (Orlando)
“Anomalous Vibrational Modes in Clathrates and Graphene”

Other Duties

*Symposium Organizer of special focus session,
American Physical Society, Solid State Division, March Meeting, 1985

*EAM Workshop-I, 8/87, Livermore

*EAM Workshop-II, 8/89, Livermore

*Symposium Co-Organizer, Special Symposium, Spring MRS meeting 1990

editor of proceedings for the above symposium: Atomic Scale Calculations of
Structure in Materials, ed. M. S. Daw and M. A. Schluter, MRS

*Symposium co-Organizer of special focus session,
American Physical Society, Solid State Division, March Meeting, 1998

*Symposium co-organizer of 2000 MRS Fall Meeting special focus session,
"The Limit of Strength in Theory and Practice"

*Symposium co-organizer, ICCN Spring 2001, Puerto Rico,
"Mechanical Properties at the Nanoscale"