

## Fall Semester 2019

### October 3: David Hickey

MSU, CHEMS

*"Using Physical Organic Chemistry Tools to Solve Problems of Grid-Scale Energy Storage"*



Hickey

CORE\_Abstract 10-3

### October 10: Charles McCrory

University of Michigan

*"The Electrochemical Conversion of CO<sub>2</sub> to CO with Molecular Co Catalysts: Modulating Activity and Selectivity by Controlling the Catalyst's Coordination Environment"*



McCrory abstract  
10-10-19.pdf

### October 17: Morris Bullock

Pacific Northwest National Laboratory

*"Design of Molecular Electrocatalysts for the Production and Oxidation of Hydrogen"*



Bullock CORE  
Abstract 10-17-19.pc

### October 24: Ellen M. Matson

University of Rochester

*"Development of metal-oxide clusters as charge carriers for nonaqueous redox-flow batteries"*



Matson CORE-CM  
Abstract 10-24-19.pc

### October 31: Jean Yves Chauleau

Nanomagnetism & Oxides Lab

*"Observation and manipulation of antiferromagnetic distributions in magneto-electric multiferroics"*



Chauleau Abstract  
10-31-19.pdf

### November 14: Rodney D. L. Smith

University of Waterloo

*"Electrocatalysts Through the Lens of Structure- Property Relationships"*



Smith  
\_CORE\_Abstract 11-

## Spring Semester 2019

### No Seminars

## Fall Semester 2018

### September 20: Yuen-Zhou

*University of California at San Diego*

“Chemistry and physics of molecules in cavities”



Yuen

Zhou\_CORE\_Abstrac

### October 4: Felix N. Castellano

*NC State University*

“Triplet Energy Transfer Across Quantum Dot – Molecular Interfaces”



Castallaono\_CORE\_  
10-4-18.pdf

### October 18: Colombo

*University of Texas at Dallas*

“Growth of 2D single crystal materials for electronic applications”



Colombo\_CORE\_Ab  
stract 10-18-18.pdf

### November 7: Klausen

*Johns Hopkins University*

“Unconventional Building Blocks for Functional Polymeric Materials”



Klausen WED  
CORE Abstract 11-7-

### November 15: Bender

*University of Toronto*

“ Non-Fullerene Electron Accepting Materials in Organic Photovoltaics: synthesis, device engineering and lifetime assessments”



Bender CORE-CM  
Abstract 11-15-18.pc

### December 6: Delerue

*University of Lille, France*

“Colloidal semiconductor nanocrystals: From single objects to artificial solids”



Delerue Abstract  
12-6-18.pdf

## Spring Semester 2018

### No Seminars

## Fall Semester 2017

### September 7: Selvan Demir

University of Göttingen

*“Lanthanide-Based Single-Molecule Magnets”*



Demir\_CORE\_abstra  
ct\_9-7-17.pdf

## Spring Semester 2017

### January 12: Maksym Kovalenko

ETH, Zurich

*“Nano- and single-crystals of lead halide perovskites: from bright light emission to hard radiation detection”*



Kovalenko\_abstract  
1-12-17.pdf

### February 2: Joel Ager

Lawrence Berkeley National Labs

*“Charge Selective Contacts in Photovoltaic and Photoelectrochemical Devices & Joint Center for Artificial Photosynthesis”*



Ager\_core-cm  
seminar abstract 2-2

### February 9: Garry Rumbles

National Renewable Energy Labs/ U. Colorado & Imperial College

*“Excitons, Charge-Transfer states, Charge-Separated states, the path to free carriers and the importance of charge delocalization”*



Rumbles abstract  
2-9-17.pdf

### February 16: Omar Farha

Northwestern University

*“Functional and Catalytic Metal–Organic Framework Materials”*



Farha CORE-CM  
abstract 2-16-2017.p

### February 23: Sylwia Ptasinska

Notre Dame, Physics

*“Probing Interfacial Processes at H<sub>2</sub>O/III-V Semiconductor Surfaces under Operando Conditions”*



Kovalenko\_abstract  
1-12-17.pdf

**February 16: Brett Helms**

*Lawrence Berkeley National Labs*

*“Applying the Tools of Materials Genomics to Address Charge-Transport Bottlenecks in Electrochemical Devices”*



Helms\_Abstract\_Core CM seminar\_3-16-

**March 23: David Waldeck**

*University of Pittsburgh*

*“Directing Charge Transfer in Semiconductor Assemblies”*



David Waldeck\_CORE-CM

**March 30: Richard Brutchey**

*University of Southern California*

*“Revisiting Alchemy: The Search for a Modern-Day Alkahest to Solution Process “Insoluble” Bulk Materials”*



Brutchey\_CORE\_Abstract 3-30-17.pdf

**April 6: Anders Hagfeldt**

*École Polytechnique Fédérale de Lausanne (EPFL)*

*“The Versatility of Mesoscopic Solar Cells”*



Anders Hagfeldt\_CORE-CM

**April 20: Gerald Meyer**

*U. North Carolina – Chapel Hill*

*“Dye-Sensitization for Sustainable Energy”*



Gerald Meyer\_CORE-CM Se

**April 27: Vanessa Wood**

*ETH-Zurich*

*Understanding and Optimizing Solution-Processed Systems*



Vanessa Wood\_CORE-CM Se

## Fall Semester 2016

### September 1: Thomas Cundari

*University of North Texas*

“Catalysis in the 21st Century: What Role Can/Will Theory Play?”



Thomas  
Cundari\_CORE-CM 5

### September 8: John W. Frost

*Michigan State University (Chemistry)*

“Synthesis of Biobased Terephthalic Acid from Methane”



9-8-16 Frost  
Core-cm Seminar Ab

### September 15: Pamela Silver

*Harvard University Medical School*

“Designing Biology for Health and Sustainability”



Pamela  
Silver\_CORE-CM Sen

### September 22: Yogesh Surendranath

*MIT*

“Graphite-Conjugated Catalysis”



Yogesh  
Surendranath\_CORE

### September 29: Wei Liao

*Michigan State University (Biosystems and Agricultural Engineering)*

“Turning Chemistry into Food-Energy-Water Nexus Solutions towards Global Sustainability”



Wei Liao\_CORE-CM  
Seminar\_Abstract\_9-

### October 6: Christophe Copéret

*ETH Zürich*

“Molecular understanding and controlled Functionalization of surfaces towards single-site catalysts and beyond”



Christophe  
Coperet\_CORE-CM 5

**October 13: Richard Finke**

*Colorado State University*

“The ‘Who’s the Catalyst?’ Problem: Distinguishing Homogeneous from Heterogeneous Catalysis”



Richard  
Finke\_CORE-CM Sen

**October 20: Francisco Zaera**

*University of California Riverside*

“The Route to Better Catalysts: From Surface Science to Nanotechnology”



Francisco  
Zaera\_CORE-CM Sen

**October 27: Paul T. Barger**

*UOP LLC, a Honeywell Co.*

“UOP Advanced MTO Technology – A New Route for the Production of Light Olefins”



Paul  
Barger\_CORE-CM Se

**November 7: Ive Hermans**

*University of Wisconsin*

“Science and Serendipity in Heterogeneous Catalysis Research”



Ive  
Hermans\_CORE-CM

**November 17: Christine Luscombe**

*University of Washington*

“Precise engineering of semiconducting polymers and their hybrids for organic electronics”



Christine  
Luscombe\_CORE-CM

**December 1: Jared Lewis**

*University of Chicago*

“Engineering Proteins for Selective Catalysis”



Jared  
Lewis\_CORE-CM Sen

**December 8: James Boncella**

*Los Alamos National Laboratory*

“Addition of HX to Transition Metal Amide Bonds: Catalysts for Nitrile Hydration and the Water Aldehyde Shift Reaction”



James  
Boncella\_CORE-CM

## Spring Semester 2016

### February 18: Mohammad Maghrebi

*Department of Physics, University of Maryland*

"How can we understand non-equilibrium many-body states?"



Maghrebi  
CORE-CM Abstract 2

### February 25: Benjamin Fregoso

*Department of Physics, UC Berkeley*

"Irradiated topological matter: quantum design leads to solar harvesting"



Fregoso  
Abstract.pdf

### March 3: Mark Ratner

*Department of Chemistry, Northwestern University*

"Charge transport in organic solar materials"



Mark  
Ratner\_CORE-CM Se

### March 24: Y.Y. Lau

*Nuclear Engineering, University of Michigan*

"Magnetic Rayleigh-Taylor Instability in High Current Beams"



Y.Y. Lau\_CORE-CM  
Seminar\_Abstract.pc

### March 31: Yue Qi

*Department of Chemical Engineering and Materials Science, Michigan State University*

"Predicting Transport Properties of the Solid Electrolyte Interphases (SEI) in Li-ion Batteries"



Yue Qi\_CORE-CM  
Seminar\_Abstract.pc

### April 7: Rebecca Anthony

*Department of Mechanical Engineering, Michigan State University*

"Plasmas for controlling the synthesis and properties of semiconductor nanocrystals"



anthony CORE CM  
Abstract\_4-7-16.pdf

**April 14: Troy Van Voorhis**

*Department of Chemistry, MIT*

"Electronic Dynamics in Complex Environments: From Electron Transfer to Singlet Fission"



Van Voorhis  
Abstract 4-14-2016.p

**April 21: Phil Duxbury**

*Department of Physics, Michigan State University*

"Optimal control of electronic excitations in the solid state"



Duxbury  
4-21-16.pdf

**April 28: Todd Martinez**

*Department of Chemistry, Stanford University*

"Discovering Chemistry with an Ab Initio Nanoreactor"



Todd  
Martinez\_CORE-CM

**Fall Semester 2015 (focus on Theory of ultrafast physical and chemical processes)**

**(Friday)September 4: Andrew Baczewski**

*Sandia National Laboratories*

"Modeling Real-Time Electron-Ion Dynamics Using Time-Dependent Density Functional Theory"



Baczewski\_Seminar  
\_Abstract.pdf

**September 10: Piotr Piecuch**

*Chemistry Department, Michigan State University*

"Understanding Photochemistry, Multi-photon Ionization and Photoelectron Spectra with the Equation-of-Motion Coupled Cluster Theory"



CORE-CM\_Abstract\_  
91015\_Piecuch.pdf

**September 17: Alexander Efros**

*Naval Research Laboratory*

"Semiconductor Nanocrystals: Discovery, Milestones and Recent Theoretical Developments"



Alexander  
Efros\_Core-CM Semi



## September 24: Hua Guo

*Department of Chemistry, University of New Mexico*

"Mode Specificity and Bond Selectivity in Dissociative Chemisorption"



Hua Guo\_Core-CM  
Seminar\_Abstract.pc

## October 1: Di Liu

*Mathematics Department, Michigan State University*

"Multiscale Modeling and Computation of Optically Manipulated Nano Devices"



CORE-CM\_Abstract\_  
Di Liu.pdf

## October 8: Anatoli Polkovnikov

*Department of Physics, Boston University*

"Universal dynamics near continuous phase transitions"



Polkovnikov.Anatoli  
\_Core-CM Seminar\_4

## October 15: Alex Levchenko

*Department of Physics, University of Wisconsin at Madison*

"Amplitude modes and dynamic coexistence of competing orders in multicomponent superconductors"



Levchenko.Alex\_Cor  
e-CM Seminar\_Abstr

## October 22: Ben Levine

*Chemistry Department, Michigan State University*

"Conical Intersections and Non-Radiative Recombination in Semiconductor Nanocrystals"



CORE-CM\_Abstract\_  
Levine.pdf

## October 29: Xiaosong Li

*Department of Chemistry, University of Washington*

"Understanding Excitonic Dynamics using Time-Dependent Electronic Structure Theory"



Li,  
Xiaosong\_core-cm\_a

## **November 12: Jim Freericks**

*Department of Physics, Georgetown University*

"Time-resolved photoemission spectroscopy in charge-density-wave insulators and superconductors"



Jim

Freericks\_Core-CM S

## **November 19: Carsten Ullrich**

*Department of Physics, University of Missouri*

"The time dependent particle-hole map"



Carsten

Ullrich\_Core-CM Sen

## **December 3: Dominika Zgid**

*Department of Chemistry, University of Michigan*

"Systematically improvable multiscale methods for correlated electron systems"



Zgid\_Core\_CM\_semi  
nar\_12-3-15\_abstrac

## **Fall Semester 2014 (focus on Spintronics)**

### **September 4: Nitin Samarth**

*Department of Physics, Penn State University*

"Topological Spintronics"



Samarth CORE-CM  
Abstract.pdf

### **(Special day) September 8: Roland Kawakami**

*Department of Physics, Ohio State University*

"Physics and technology of spin-dependent phenomena in graphene"



Kawakami Joint  
CMP CORE-CM Abst

### **(Special day) September 15: Dan Gammon**

*Naval Research Laboratory*

"Optical control of quantum dot spins in a photonic crystal: working towards a quantum network"



Gammon Joint CMP  
CORE-CM Abstract.p

**September 25: David Schultz**

*Department of Chemistry, North Carolina State University*

"Donor-Bridge-Acceptor Biradicals in Ground-and-Excited States: Correlation of Exchange and Electronic Coupling with Excited-State Wave Function Mixing"



Shultz\_Abstract\_925  
14.pdf

**October 9: Igor Zutic**

*Department of Physics, University of Buffalo*

"Teaching Nanomagnets New Tricks"



Zutic CORE-CM  
Abstract.pdf

**October 16: Paul Weiss**

*Department of Chemistry, UCLA*

"California NanoSystems Institute and Departments of Chemistry & Biochemistry and Materials Science & Engineering, UCLA, Los Angeles, CA 90095 "



Weiss\_CORE-CM\_10  
1614.pdf

**October 23: Song Jin**

*Department of Chemistry, University of Wisconsin*

"Detection and Manipulation of Magnetic Skyrmions in Metal Silicide Nanowires"



Jin CORE-CM  
Abstract.pdf

**(Special day) November 3: Xiaodong Xu**

*Department of Physics, University of Washington*

"Spins and pseudospins in 2D semiconductors"



Xu CMP  
Abstract.pdf

**November 6: Ken Knappenberger**

*Department of Chemistry, Florida State University*

"Single-structure Studies of Chiro-optical Nanomaterials"



Knappenberger  
CORE-CM Abstract.p

### **November 13: Michael Flatte**

*Department of Physics, University of Iowa*

"Room-temperature electronic spin correlations: towards spincoherent technologies"



Flatte CORE-CM  
Abstract.pdf

### **November 20: Jeff Long**

*Department of Chemistry, UC Berkeley*

"New Single-Molecule Magnets with High Blocking Temperatures"



Long\_Core-cm  
Seminar\_Abstract\_TF

### **December 4: Juan Peralta**

*Department of Physics, Central Michigan University*

"Magnetic Interactions in Transition Metal Complexes from First-Principles"



Peralta CORE-CM  
Abstract.pdf

## **Spring Semester 2014 (focus on Ultrafast Science)**

### **January 9: Marcos Dantus**

*Department of Chemistry, Michigan State University*

"Developing and applying the concept of ultrafast shaped pulses as photonic reagents and coherence probes"



CORE-CM Abstract  
Dantus.pdf

### **January 16: Warren Beck**

*Department of Chemistry, Michigan State University*

"Nonlinear Optical Studies of Radiation less Decay and Energy Transfer by Carotenoids in Photosynthetic Light Harvesting Proteins"



CORE-CM Abstract  
Beck.pdf

### **January 23: Benjamin Schwartz**

*Department of Chemistry and Biochemistry, University of California at Los Angeles*

"To Be or Not to Be in a Cavity: The Hydrated Electron Dilemma"



CORE-CM Abstract  
Schwartz.pdf

### **January 30: Theodore Goodson**

*Department of Chemistry, University of Michigan*

"Ultrafast Dynamics in Organic and Inorganic Materials with Enhanced Optical Effects"



Goodson -  
Abstract.pdf

### **February 6: Michael Therien**

*Department of Chemistry, Duke University*

"Ultrafast Exciton Migration and Charge Transfer Dynamics in Semiconducting Polymer-Carbon Nanotube Superstructures"



Therien CORE-CM  
Abstract.pdf

### **February 13: Paul Evans**

*Department of Materials Science and Engineering, University of Wisconsin*

"Ultrafast Dynamics in Complex Oxide Electronic Materials"



Evans CORE-CM  
Abstract.pdf

### **February 20: John Papanikolas**

*Department of Chemistry, University of North Carolina at Chapel Hill*

"Visualizing Charge Carrier Motion in Nanowires Using Femtosecond Pump-Probe Microscopy"



Papanikolas  
Abstract.pdf

### **February 27: Michael Wasielewski**

*Department of Chemistry and Director, Argonne-Northwestern Solar Energy Research Center, Northwestern University*

"Exciton Dynamics and Structural Investigations of Singlet Fission in Molecular Solids"



Wasielewski  
Abstract 2-27-14.pdf

### **March 13: Tinquian (Tim) Lian**

*Department of Chemistry, Emory University*

"Solar Energy Conversion using Atoms, Molecules, and Solids"



Lian Abstract.pdf

**March 20: John McGuire**

*Department of Physics and Astronomy, Michigan State University*  
"Dynamics and Interactions of Strongly Confined Excitons in Graphene"

No abstract

**March 27: Andrei Tokmakoff**

*Department of Chemistry, University of Chicago*  
"Ultrafast Dynamics of Hydrogen Bond Networks in Water from Broadband Infrared Spectroscopy"



Tokmakoff  
Abstract.pdf

**April 3: Xiaoyang Zhu**

*Department of Chemistry, Columbia University*  
"Exciton Fission, Quantum Coherence, & Solar Energy Conversion Beyond the Limit"



Zhu Abstract.pdf

**April 10: Linda Young**

*Director X-Ray Science Division, Argonne National Laboratory*  
"Perspectives on Ultrafast X-ray Studies at DOE Light Sources"



Young CORE-CM  
Announcement.pdf

**April 17: Louis DiMauro**

*Department of Physics, The Ohio State University*  
"Attoseconds: Faster than a New York Minute"



DiMauro CORE-CM  
abstract.pdf

**April 24: Sergei Tretiak**

*Physics and Chemistry of Materials, Theoretical Division, Los Alamos National Laboratory*  
"Photoexcited Conjugated Chromophores: Conformational Dynamics, Relaxation Pathways, and Energy Transfer"



Tretiak Abstract.pdf

## Fall 2013 Seminar (focus on *Earth abundant materials for the renewable fuels cycle*)

**9/12: Mitch Smith**

*Chemistry, MSU*

**9/19: Nate Neale**

*NREL*

“Controlling the Properties of Silicon and Germanium Nanocrystals for Advanced Energy Applications”



CORE-CM Abstract  
Neale.pdf

**9/26: Dan Nocera**

*Harvard/MSU*

**10/10: Antoine Kahn**

*Princeton*

“Organic Electronics: a fast-developing world of interfaces”



CORE-CM Abstract  
Antoine Kahn.pdf

**10/17: Vladimir Bulovic**

*MIT*

“Colloidal Quantum Dots in Efficient LEDs and Displays”



CORE-CM  
Announcement - V.

**10/24: Elena Jakubikova**

*North Carolina State University*

“Earth-abundant solar cells: Can iron complexes serve as photosensitizers in DSSCs?”



Jakubikova  
Abstract.pdf

**11/7: Don Morelli**

*Engineering, MSU*

“Romancing the Rock: High Performance Thermoelectricity in Mineral-Based Materials”



Morelli -  
Abstract.pdf

**11/14: Mark Worden**

*Engineering, MSU*

“Nanostructured Biomimetic Systems: Synergy at the Nano/Bio Interface”



Worden -  
Abstract.pdf

## **Spring 2013 Seminar (focus on *Energy harvesting and the renewable fuels cycle*)**

### **February 14: Scott Calabrese-Barton**

*Chemical Engineering and Materials Science, Michigan State University*

"Non precious metal catalysts for Oxygen reduction in fuel cells"

### **February 21: Gemma Reguera**

*Microbiology, Michigan State University*

"Long-range electron transfer in microbial protein nanowires"

### **February 28: Richard Lunt**

*Chemical Engineering and Materials Science, Michigan State University*

"Unique prospects and limits for excitonic photovoltaics "

### **March 14: Pengpeng Zhang**

*Physics and Astronomy, Michigan State University*

"Growth of light harvesting organic molecules on inorganic substrates"

### **March 21: Juan Bisquert**

*Department of Physics, University Jaume I, Castello Spain*

"Solar energy conversion with nanoheterostructures"

### **March 28: Alison Walker**

*Physics, University of Bath, United Kingdom*

"Modeling of light harvesting and water splitting"

### **April 10 (Wednesday): Special Seminar - Mark Tuckerman**

*Department of Chemistry and Courant Institute, NYU*

"Materials in silico: Structure, transport and functionalization"

### **April 18: Tom Hamann**

*Chemistry, Michigan State University*

"Photoelectrochemical Investigation of Water Splitting with Hematite Thin Film Electrodes"

## **Fall 2012 Seminar (focus on *Effects of swift heavy ions and/or ultrafast lasers on complex materials*)**

### **September 20: Maik Lang**

*University of Michigan*

"Structural modifications in complex oxides induced by swift heavy ions"



**Special seminar September 20: Marcel Toulemonde**

*CIMAP-GANIL*

"Track Formation and Sputtering Materials: Experiments as a Guide to Develop the Inelastic Thermal Spike Model"

**September 27: Georg Bollen**

*Michigan State University/FRIB*

"FRIB extreme materials challenges"

**October 4: Carl Boehlert**

*CHEMS, Michigan State*

"Development of Methodologies for Characterization of the Microstructure and Deformation Behavior of Radioactive Materials and Materials to be used in Irradiation Environments"

**October 18: Gary Was**

*University of Michigan*

"Strategies for studying radiation effects in materials using ion beams"

**October 25: Michael Nastasi**

*University of Nebraska and Los Alamos*

"Role of interfaces for materials in extreme irradiation environment"

**November 1: Yongqiang Wang**

*Ion beam materials laboratory, Los Alamos*

"Ion irradiation and damage response of nanostructures"

**November 8: Brian Wirth**

*University of Tennessee and Oak Ridge National Laboratory*

"Computational modeling and measurements of radiation effects in materials"

**November 15: William Weber**

*University of Tennessee and Oak Ridge National Laboratory*

"Effects of ionization on damage formation and recovery under ion irradiation"

**December 13: Rod Ewing**

*Earth and Environmental Sciences, University of Michigan*

"Forms for nuclear waste storage: The road not taken"

**Fall 2010 Seminar (focus on *Complex materials and related energy and medical technologies*)**

**October 7: Andrew Christlieb**

*Mathematics, MSU*

"Computational plasma science and its materials applications"

**October 14: Jeff Sakamoto**

*Chemical Engineering and Material Science - MSU*

"Materials for Batteries and thermoelectric devices"

**October 21: Veronica Barone**

*Chemistry and Physics, CMU*

"Ab-initio calculations of adsorption and diffusion of Li on graphene"

**October 28: David Tomanek**

*Physics and Astronomy, MSU*

"Probing and transforming nanostructures with light and sound"

**November 11: XueFei Hwang**

*Chemistry, MSU*

"Magnetic Glyco-Nanoparticles, a Unique Tool for In Vitro and In Vivo Detection"

**November: Anish Tuteja**

*Materials Science - UM*

"Design and self-assembly of superhydrophobic surfaces"

**Spring 2010 Seminar (focus *Complex materials and applications to energy and medical technologies*)**

**Special: January 20: Shijie Wu/Ryan Smith**

*Agilent Technologies*

"Scanning Probe Microscopy in Controlled Environments: A discussion of experimental possibilities in liquid, gas, and temperature-controlled environments"

**January 21: Piotr Piecuch**

*Chemistry, MSU*

"Extending Ab Initio Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster Methodology and Its Multi-Level Generalizations"

**February 4: Jason Nicholas**

*Chemical Engineering and Materials Science, MSU*

"Interface Engineered Oxide Nano-Composites for Next-Generation Electrochemical Devices"

**February 18: Andrey Kalinichev**

*Chemistry, MSU*

"Computational molecular modeling of the structure and dynamics of nano-confined water and ions in layered organo-inorganic materials"

**February 25: Andrew Mason**

*Electrical and Computer Engineering, MSU*

"On-chip bio-electrochemical interfaces: challenges and applications for sensing and biological research"

**March 4: Rob Cain/Keith Jones**

*Asylum Technologies*

"Asylum MFP-3D atomic force microscopy for characterization of soft and hard surfaces, with temperature and environmental control"

**March 25: Ruby Ghosh**

*Physics, MSU*

"Nano-scale optical indicators and materials: Real time oxygen sensing for chemical and biological applications"

**April 1: Guowei Wei**

*Mathematics, MSU*

"Classical and quantum models for nano-bio systems"

**April 15: Wei Lai**

*Chemical Engineering and Materials Science, MSU*

"Introduction to Impedance Spectroscopy of Electrochemical Devices"

**April 22: Deepak K Pandey**

*Birck Nanotechnology Center, Purdue University*

"Study of Novel Materials for Nanoelectronics: A Scanning Probe Microscope Study of Graphene and Graphite Oxide."

**April 29: Jiebing Sun**

*Physics, University of New Hampshire and IBM Yorktown Heights*

"Structural and electronic properties of SiC(0001), graphene/Ni(111), and suspended graphene"

**May 6: Leonid V. Zhigilei**

*Department of Materials Science and Engineering, University of Virginia*

"Molecular dynamics simulations of laser-induced structural transformations and ablation of molecular materials and metals."

**June 3: John Verboncoeur**

*Nuclear Engineering, UC Berkeley*

"Particle-in-cell modeling of plasmas and applications to devices"