

MONDAY, JULY 16, 2012

Session I, Materials, Dane McCamey Chairing	
8:00 a.m.	Welcoming Remarks. Christoph Boehme
8:10 a.m.	EPR Applications in Materials. <u>Steven Lyon</u> , Princeton University
8:40 a.m.	Rapid Scan EPR of Signals in Materials with Long Electron Spin Relaxation Times. <u>Deborah Mitchell</u> , University of Denver
9:00 a.m.	Spin-orbit ferromagnetic resonance. <u>Andrew Ferguson</u> , University of Cambridge
9:30 a.m.	Ultrafast Nuclear Spin Entanglement Using an Optical Degree of Freedom. <u>Brandon W. Lovett</u> , University of Edinburgh
9:50 a.m.	<i>Break</i>
10:20 a.m.	Optically Detected Magnetic Resonance Study of Interface Quality in Semiconductor Heterostructured Nanocrystals. <u>Efrat Lifshitz</u> , Technion
10:50 a.m.	Probing Electronic Trap States in Colloidal Nanocrystals with Optically Detected Magnetic Resonance. <u>Kipp van Schooten</u> , University of Utah
11:10 a.m.	Quantum Control of Hybrid Nuclear-electronic Qubits. <u>Gavin Morley</u> , University of Warwick
11:40 a.m.	Cross-Sectional Dynamics of Self-Assembled Nanofibers for Neuronal Regeneration. <u>Julia Ortony</u> , Northwestern University
12:00 p.m.	<i>Lunch (included w/registration)</i>
Session II, Proteins, Fraser MacMillan Chairing	
1:30 p.m.	Extending the Sensitivity, Distance and Orientation Measurement in Spin-Labelled Proteins by Total Deuteration. <u>David Norman</u> , University of Dundee
2:00 p.m.	Probing Interdomain Structure in the Prion Protein by Pulsed Dipolar Spectroscopy. <u>Eric Evans</u> , University of California, Santa Cruz
2:20 p.m.	Gd³⁺-Based Spin Probes for Enhanced EPR Distance Measurements in Complex Sample Environments and at Elevated Temperatures. <u>Devin Edwards</u> , University of California, Santa Barbara
2:40 p.m.	DNA Conformational Changes in a p53 Response Element Revealed by Site-Directed Spin Labeling. <u>Xiaojun Zhang</u> , University of Southern California
3:00 p.m.	<i>Break</i>
3:30 p.m.	A Novel Catalase Reaction in the Heme Enzyme Catalase-peroxidase and the Role of an Amino-acid Cofactor Radical. <u>Richard Magliozzo</u> , CUNY
4:00 p.m.	Observations on DEER for Distance Measurements in Proteins: Sensitivity Improvements and Incorporating the Spin Label into Docking Routines. <u>Janet E. Lovett</u> , University of Edinburgh
4:20 p.m.	Joint EPR and Molecular Dynamics Insight Into Spin-labeled Barstar Internal Dynamics Change upon Barnase Binding. <u>Yaroslav Tkachev</u> , University of North Carolina at Charlotte
4:40 p.m.	Towards the Mechanism of the Antibiotic Daptomycin: an EPR, EM and AFM approach. <u>Sandra Theison</u> , Technical University of Kaiserslautern
5:00 p.m.	<i>Break</i>
5:30-7:00 p.m.	<i>Conference Reception</i>
Session III, Posters	
7:30-9:30 p.m.	Authors Present for Posters Labeled A

TUESDAY, JULY 17, 2012

Session IV, Spin Devices, John Morton Chairing	
8:20 a.m.	EPR with On-chip Superconducting Resonators. <u>Dave Schuster</u> , University of Chicago
8:50 a.m.	Superconducting Micro-resonators for Low-temperature Pulsed ESR Measurements. <u>Hans Malissa</u> , Princeton University
9:10 a.m.	High-Fidelity Control for Pulsed ESR of Thin Film Samples in a High-Q Superconducting Microstrip Resonator. <u>Troy Borneman</u> , MIT
9:30 a.m.	Robust absolute magnetometry with organic thin-film devices. <u>Will Baker</u> , University of Utah
9:50 a.m.	<i>Break</i>
10:20 a.m.	EPR and NMR on a Single Atom in Silicon. <u>Jarry Pla</u> , University of New South Wales
10:50 a.m.	Probing Band-Tail States in Silicon Metal-Oxide-Semiconductor Heterostructures with Electron Spin Resonance. <u>R. M. Jock</u> , Princeton University
11:10 a.m.	A Quantum Memory Intrinsic to Single Nitrogen-vacancy Centres in Diamond. <u>Gregory Fuchs</u> , Cornell University
11:40 a.m.	Pulsed ESR of Photo-polarized NV Centers in Diamond at X-band Magnetic Fields. <u>B. C. Rose</u> , Princeton University
12:00 p.m.	<i>Lunch (included w/registration)</i>
Session V, Spin Trapping, Frederick Villamena Chairing	
1:30 p.m.	The Enzymatic Mechanism of Oxalate Decarboxylase Investigated by EPR Spin Trapping. <u>Alexander Angerhofer</u> , University of Florida
2:00 p.m.	Determination of Spin-spin Interaction in the EPR Spectra of Trityl-nitroxide Diradicals. <u>Antal Rockenbauer</u> , Research Center for Natural Sciences, Budapest
2:30 p.m.	EPR Spin Trapping Study of the Photo-protective Carotenoid Astaxanthin. <u>Adam Magyar</u> , University of Alabama
2:50 p.m.	Probing the Electronic Structure of Monoprotonated Semiquinone Radicals by ENDOR Spectroscopy and Density Functional Theory: The Magnetic Resonance Properties of the Hydroxyl Proton. <u>Marco Flores</u> , University of Arizona
3:10 p.m.	Effects of Lipid Bilayer Curvature on Surface Electrostatic Potential as Assessed by Spin-Probe EPR. <u>Maxim A. Voinov</u> , North Carolina State University
3:30 p.m.	<i>Break</i>
Session VI, Award Lectures, Sushil Misra, Chair	
4:00 p.m.	IES Award Session-- Sushil Misra, Secretary, IES
4:10 p.m.	Spin-label W-band EPR as a Powerful Tool for Studying Membrane Fluidity Profiles in Samples of Small Volume -- John Weil Young Investigator Award, <u>Laxman Mainali</u> , Medical College of Wisconsin
4:40 p.m.	Prions, Metal Ions and Neurodegenerative Processes-- 2012 Silver Medal in Biology/Medicine, <u>Glenn Millhauser</u> , University of California, Santa Cruz
5:10 p.m.	Annual General Meeting of the International EPR Society (IES)
6:10 p.m.	<i>Break</i>
6:15 p.m.	<i>EPR Reception</i>
Session VII, Posters	
7:45-9:45 p.m.	Authors Present for Posters Labeled B

WEDNESDAY, JULY 18, 2012

Session VIII, Methods, Johan van Tol Chairing	
8:10 a.m.	Free-electron laser-powered EPR spectroscopy. <u>Susumu Takahashi</u> , University of Southern California
8:40 a.m.	Building a free-electron laser dedicated to high-field pulsed EPR. <u>Mark Sherwin</u> , University of California, Santa Barbara
9:00 a.m.	A 140 GHz Pulsed EPR/212 MHz NMR Spectrometer for DNP Studies. <u>Albert A. Smith</u> , Massachusetts Institute of Technology
9:20 a.m.	Novel Applications of Arbitrary Waveform Generation in EPR. <u>John Franck</u> , University of California, Santa Barbara
9:40 a.m.	Pulsed Dipolar ESR Spectroscopy with Improved Sensitivity. <u>Peter Borbat</u> , Cornell University
10:00 a.m.	<i>Break</i>
10:30 a.m.	Experimental Approach to the Hydration Dynamics Landscape by Overhauser Dynamic Nuclear Polarization. <u>Song-I Han</u> , University of California, Santa Barbara
11:00 a.m.	pH Sensitive EPR Labels to Probe Local Dielectric Gradients in Protein-Membrane Interface. <u>Tatiana Smirnova</u> , North Carolina State University
11:20 a.m.	Comparison of Rapid Scan EPR and Field-Modulated CW EPR. <u>Mark Tseitlin</u> , University of Denver
11:40 a.m.	Distances and Crystal Field Splitting from Saturation-Recovery EPR of Dy(III) - NO Pairs. <u>Donald J. Hirsh</u> , The College of New Jersey
12:00 p.m.	<i>Lunch (included w/registration)</i>
Session IX, Metals in Biological Systems, Kurt Warncke Chairing	
1:30 p.m.	Metals in your Mind: Copper and the Amyloid-beta Peptide of Alzheimer's Disease. <u>Veronika Szalai</u> , National Institute of Standards and Technology
2:00 p.m.	The Mechanism of Solar Water Oxidation: Pulsed Multi-Frequency Multi-Dimensional EPR Spectroscopy Studies of Photosystem II. <u>K. V. Lakshmi</u> , Rensselaer Polytechnic Institute
2:30 p.m.	ESR spectroscopy and MD simulations reveal a new divalent metal ion binding site in a protein-DNA complex. <u>Ming Ji</u> , University of Pittsburgh
3:00 p.m.	<i>Break</i>
3:30 p.m.	Interstitial Carbon in Nitrogenase FeMo Cofactor. <u>Muge Aksoyoglu</u> , University of Freiburg
3:50 p.m.	Novel Type-II Binding Cytochrome P450 Ligands. <u>Matthew Krzyaniak</u> , University of Alabama
4:10 p.m.	The new oxygen concentration imaging method by the rapid scan EPR. <u>Tomasz Czechowski</u> , Poznan University of Technology
4:30 p.m.	Simulation of pulsed EPR experiments on molecules with incompletely frozen motions. <u>Andriy Marko</u> , Goethe University Frankfurt
4:50 p.m.	<i>Short Break</i>
5:00 p.m.	Investigations of the intriguing connections between superoxide dismutase1, carbonate radical, protein oxidation, protein aggregation and neurodegeneration--Lawrence H. Piette Memorial Lecture, <u>Ohara Augusto</u> , University of Sao Paulo
6:00 p.m.	<i>Short Break</i>
General Business Meeting	
6:05 p.m.	EPR Symposium Business Meeting

THURSDAY, JULY 19, 2012

Session X, In Vivo EPR, Boris Epel Chairing	
8:10 a.m.	In-Vivo Biological Applications of ESR Micro-Imaging. <u>Aharon Blank</u> , Technion
8:40 a.m.	“Sense & Sensibility” of Oxygen in Myocardial Infarction and Therapy. <u>Periannan Kuppusami</u> , The Ohio State University
9:10 a.m.	What we have learned and what we can learn from low frequency EPR oxygen images. <u>Howard Halpern</u> , University of Chicago
9:30 a.m.	Redox Molecular Imaging of Mouse Inflammation Model. <u>Kazuhiro Ichikawa</u> , Kyushu University
9:50 a.m.	Uniform Acquisition of Projection Data in Electron Paramagnetic Resonance Imaging for Real-Time Reconstruction and Enhanced Temporal Resolution. <u>Gage Redler</u> , University of Chicago
10:10 a.m.	<i>Break</i>
Session XI, Methods II	
10:40 a.m.	Theory of EPR lineshape in samples concentrated in paramagnetic spins: Effect of enhanced internal magnetic field on high-field high-frequency (HFHF) EPR lineshape. <u>Sushil Misra</u> , Concordia University
11:00 a.m.	Fitting 2H ESEEM data for the structural investigation of non-heme Fe(II) centered hydroxylases. <u>Thomas Casey</u> , Michigan State University
11:20 a.m.	PC Spin Labels in Gel Phase and Frozen Lipid Bilayers: Do they truly manifest a polarity gradient. <u>Boris Dzikovski</u> , Cornell University
11:40 a.m.	The Molten Globule State of Maltose Binding Protein is Partially Structured. <u>Wolfgang E. Trommer</u> , Technical University of Kaiserslautern
12:00 p.m.	Closing Remarks -- <u>Christoph Boehme</u> , Chair