# 59th Rocky Mountain Conference on Magnetic Resonance
# 41st International EPR Symposium
# Poster Presentations

**Monday, July 23: 7:30-9:00 pm (Authors Present for Posters Labeled A)**

**Tuesday, July 24: 7:30-9:00 pm (Authors Present for Posters Labeled B)**

**Late Breaking Additions**

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| A | **A High-Q Anapole Microresonator for Inductive-Detection Electron Paramagnetic Resonance Spectroscopy.**<br>Nandita Abhyankar, University of Maryland |
| B | **Picoliter Diamond NMR.**<br>Victor M. Acosta, University of New Mexico |
| A | **Locking and Tracking Magnetic Resonance Spectra of $NV^-$ Center for Real-time Magnetometry.**<br>Kapildeb Ambal, National Institute of Standards and Technology |
| B | **Better Resolution of High Spin Co Hyperfine at Low Frequency, L-band: Co-bovine Serum Albumin, A Model for Obtaining Co Hyperfine in High Spin Complexes of Biological Interest.**<br>William E. Antholine, Medical College of Wisconsin |
| A | **Insights into the Catalytic Mechanism of [FeFe]-hydrogenase II from *Clostridium Pasteurianum*.**<br>Jacob H Artz, National Renewable Energy Laboratory |
| B | **Spin Dependent Charge Pumping and Spin Dependent Recombination Study of $SiC/SiO_2$Interface Passivation.**<br>James P. Ashton, Pennsylvania State University |
| A | **Electric-Field Quenching of Magnetic Resonance in the Photoluminescence of p-Conjugated Polymer Films.**<br>Douglas L. Baird, University of Utah |
| B | **$^2$H-Cross-polarization Edited ENDOR at 94 GHz to Study the Conformation of Protein Radical Intermediates.**<br>Isabel Bejenke, Max Planck Institute for Biophysical Chemistry |
| A | **DFT Calculation of Zero-field Splitting in Extended Periodic Systems.**<br>Timur Biktagirov, University of Paderborn |
| B | **Exploring Frequency-swept Excitation for Distance Measurements Between Nitroxide Spin Labels.**<br>Frauke Breitgoff, ETH Zürich |
| A | **Heisenberg Spin Exchange for Anomalous Diffusion in a Percolation Network.**<br>David E. Budil, Northeastern University |
| B | **Characterizing Microwave Efficiency in DNP Instrumentation by Frequency Swept EPR.**<br>Anne M. Carroll, Yale University |
| A | **Application of EPR Towards Cr/PNP Based Ethylene Tetramerization Catalysis.**<br>Sonia Chabbra, University of St Andrews |
| B | **Wireless Implantable Coil with Parametric Amplification for In Vivo Electron Paramagnetic Resonance Oximetric Applications.**<br>Nallathamby Devasahayam, National Institues of Health |
| A | **An Ultra-high Vacuum Electron Spin Resonance Spectrometer for the Investigation of Magnetic Atoms and Molecules at Surfaces.**<br>Fabio Donati, Ewha Womans University |

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| B | **Design, Synthesis and Characterization of New Triarylmethyl (TAM) Radicals for Biomedical EPR Applications.**<br>Benoit Driesschaert, West Virginia University |
| A | **Automated DEER Data Processing using Bayesian Inference.**<br>Thomas H. Edwards, University of Washington |
| B | **Redistribution of EC-SOD Due to the R213G Variant Influences the Local Redox Environment in Bleomycin-induced Lung Injury.**<br>Hanan Elajaili, University of Colorado |
| A | **Allosteric Conformational Rearrangements of a Prokaryotic Cyclic Nucleotide-gated Ion Channel Probed with Pulsed Dipolar Spectroscopy.**<br>Eric G.B. Evans, University of Washington |
| B | **Effect of Freezing Rate on the Spin Dynamics of Finland Trityl.**<br>Benjamin R. Fowler, University of Alabama |
| A | **Spin-labeled Nanobodies: A New Tool Towards EPR Studies in Cellular Environments.**<br>Laura Galazzo, Ruhr-Universität Bochum |
| B | **Update on the SharedEPR Network.**<br>Gary J. Gerfen, Albert Einstein College of Medicine |
| A | **Magnetic Resonance, Index Compression Maps and the Holstein-Primakoff Bosons: Polynomially Scaling Exact diagonalization of Isotropic Multispin Hamiltonians.**<br>Jerryman A. Gyamfi, Scuola Normale Superiore di Pisa |
| B | **Quantum Markovian Master Equation Approach to Magnetic Resonance: An Alternative to the Stochastic Liouville Equation.**<br>Jerryman A. Gyamfi, Scuola Normale Superiore di Pisa |
| A | **PELDOR/DEER Spectroscopy Reveals Two Defined States of a Sialic Acid TRAP Transporter Substrate Binding Protein in Solution.**<br>Gregor Hagelueken, University of Bonn |
| B | **Development of GaAs Switches for Advanced Pulse Sequences for EPR powered by a Free-Electron Laser.**<br>Marzieh Kavand, University of California Santa Barbara |
| A | **Powder and Single Crystal EPR Study of Metal-organic Framework $Cu_{2.931}Zn_{0.069}(btc)_2$.**<br>Anastasia Kultaeva, Leipzig University |
| B | **Pulsed EPR Studies of Spin-Spin Interactions in Trityl Radicals.**<br>Molly M. Lockart, University of Alabama |
| A | **FD-FT THz-EPR as a Tool to Study Magneto-Structural Correlations in Single-Molecule Magnets: (Pseudo)-Tetrahedral $Co^{II}$Complexes with $[N_2O_2]$ Coordination Environment.**<br>Thomas Lohmiller, Helmholtz-Zentrum Berlin für Materialien und Energie |
| B | **Vanadyl Ligand Speciation Through High-Resolution $^1$H ENDOR.**<br>Donald Mannikko, University of Washington |
| A | **Trajectory-based Simulations of Electron Paramagnetic Resonance Spectra.**<br>Peter D. Martin, University of Minnesota |
| B | **An EPR Examination of 3D Printing Materials.**<br>Robert M McCarrick, Miami University |
| A | **$^1$H-HYSCORE Reveals Details of the Coordination Chemistry at the Fe(II) Site of Taurine/2-Ketoglutarate Dioxygenase.**<br>John McCracken, Michigan State University |
| B | **Field-Stepped-Direct-Detection Electron Paramagnetic Resonance (FSDD-EPR) at Low Temperatures using a Metal Free Cryostat.**<br>Joseph E. McPeak, University of Denver |
| A | **An Algorithm to Calculate Polycrystalline Pulsed EPR Signals with Relaxation Rigorously in Liouville Space using Stochastic Liouville Equation.**<br>Sushil K. Misra, Concordia University |

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| B | **Excitonic Transport in Amorphous Silicon Studied by Pulsed Electrically Detected Magnetic Resonance.**<br>Jannik Möser, Helmholtz-Zentrum Berlin für Materialien und Energie |
| A | **Low Magnetic Field Electrically Detected Magnetic Resonance Spectroscopy with Circularly Polarized RF Excitation.**<br>Adnan Nahlawi, University of Utah |
| B | **Linear Prediction to Supplement FT-EPR of Transient Spin-Correlated Radical Pairs.**<br>Jordan Nelson, Northwestern University |
| A | **Electron Spin Relaxation Times of Spin Labels Without Gem-dimethyl Groups.**<br>Thacien Ngendahimana, University of Denver |
| B | ***In Situ* Electron Paramagnetic Resonance Spectroscopy – Understanding Mechanisms in Lithium-Oxygen Batteries.**<br>Thuc Anh Nguyen, University of California Berkeley |
| A | **Multi-Extreme THz ESR: Development of Mechanically Detected ESR up to the THz Region.**<br>Hitoshi Ohta, Kobe University |
| B | **Combining PELDOR and SAXS to Study the Solution Structure and Function of Type-III-effector Protein YopO from *Yersinia Pestis*.**<br>Martin F. Peter, University of Bonn |
| A | **Dextran-grafted Triarylmethyl Radicals.**<br>Martin Poncelet, West Virginia University |
| B | **Fringe Field Measurements of Ferromagnetic NiFe Films using Electrically Detected Magnetic Resonance.**<br>Henna Popli, University of Utah |
| A | **Simulating Experiments with Shaped Pulses using EasySpin.**<br>Stephan Pribitzer, ETH Zurich |
| B | **Two-Dimensional Distance Correlation Maps from Pulsed Triple Electron Resonance (TRIER) on Model Compounds and Proteins.**<br>Stephan Pribitzer, ETH Zurich |
| A | **Software for Advanced and Global Analysis of EPR data: GloPel and SpecProFi.**<br>Stephan Rein, University of Freiburg |
| B | **Orienting the Dimerization of Retinal Guanylyl Cyclase Activating Protein 1 using DEER Derived Distances and Molecular Modeling.**<br>Graham Roseman, University of California Santa Cruz |
| A | **Imaging of Enzyme Activity by Electron Paramagnetic Resonance (EPR). Synthesis and Characterization of an Alkaline Phosphatase-sensitive Nitroxide Spin Probe.**<br>Urikhan Sanzhaeva, West Virginia University |
| B | **An Equatorial Histidine Swap in the Prion Protein Copper Center is Essential for its Neuroprotective Self-Regulation.**<br>Kevin Schilling, University of California Santa Cruz |
| A | **Non-nucleoside Inhibitors Modulate the Conformational States of the Finger and Thumb Subdomains of HIV-1 Reverse Transcriptase as Probed by Q-Band EPR Spectroscopy.**<br>Thomas Schmidt, National Institutes of Health |
| B | **Automation of a Terahertz Frequency Rapid Scan ESR Spectrometer.**<br>Matúš Šedivý, Central European Institute of Technology, Brno |
| A | **Collaborative Research on Molecular Spins for Quantum Information Technologies in the Frame of the European COST Action "Molecular Spintronics".**<br>Roberta Sessoli, University of Florence |
| B | **A New Gadolinium Spin Label Gives High Sensitivity and Precision in Double Electron Electron Resonance Distance Measurements.**<br>Anokhi Shah, University of St Andrews |

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| A | **Lipoxygenase H-tunneling Efficiency Linked to ENDOR-detected Perturbations in Ground-state Structure.**<br>Ajay Sharma, Northwestern University |
| B | **EPR Imaging at VHF with Field Reversal Background Correction.**<br>Yilin Shi, University of Denver |
| A | **Air Stable Triplet Ground State Diradical Dication and Radical Cation of Conjoined Double Helicene.**<br>Chan Shu, University of Nebraska Lincoln |
| B | **Intermediate Excited States for Optical Excitation and Electrical Generation in Donor: Acceptor based OLEDs.**<br>Andreas Sperlich, University of Würzburg |
| A | **Accurate and Direct Determination of Distance Distributions for Pulsed Dipolar ESR by Singular Value Decomposition.**<br>Madhur Srivastava, ACERT and Cornell University |
| B | **Characterization of the Distribution of Spin-lattice Relaxation Rates of Lipid Spin Labels in Fiber Cell Plasma Membranes of Eye Lenses with a Stretched-exponential Function.**<br>Natalia Stein, Medical College of Wisconsin |
| A | **Characterization of the Mechanism of Solvent-Protein Coupling to the Radical Rearrangement Reaction in $B_{12}$-Dependent Ethanolamine Ammonia-Lyase.**<br>Andrew M. Stewart, Emory University |
| B | **Structure and Mechanism of Assembly of the Ethanolamine Utilization (Eut) Bacterial Microcompartment (BMC) Shell Components.**<br>Katie L. Stewart, Emory University |
| A | **Precise Determination of Spin Concentration using Double Electron-electron Resonance.**<br>Susumu Takahashi, University of Southern California |
| B | **Computational Modeling of the Cytotoxic PLA2, ExoU, using SDSL EPR.**<br>Maxx H Tessmer, Medical College of Wisconsin |
| A | **4-pulse Nitroxide-nitroxide Q-band DEER Revisited.**<br>Markus Teucher, Ruhr-Universität Bochum |
| B | **Anesthesia Free Pre-Clinical Rapid Scan Oximetry.**<br>Oxana Tseytlin, West Virginia University |
| A | **Contributions of Specific Configurational Fluctuations and Solvent Coupling to the Core Chemical Step in $B_{12}$-dependent Ethanolamine Ammonia-Lyase Catalysis Revealed by Multiple EPR Techniques.**<br>Kurt Warncke, Emory University |
| B | **Field-reversal Method for Rapid Scan Background Correction.**<br>Lukas B. Woodcock, University of Denver |
| A | **Trityl Radicals for EPR Spectroscopic Measurements on Oligonucleotides.**<br>Christine Wuebben, University of Bonn |
| B | **EPR Distance Restraints as Core for Integrative Structure Modelling of 85 kDa PBTP1/EMCV-IRES Complex.**<br>Christoph Gmeiner, ETH Zurich |
| A | **Electronic Structure Investigation of Self-doped type Organic Conductors by Magnetic Resonance Spectroscopy.**<br>Toshikazu Nakamura, Institute for Molecular Science |
| B | **Isolation of a New Radical Species in a Pyrylium-based Photopolymerization Detected by cw-ESR and Pulsed ENDOR Spectroscopy.**<br>Timothee Chauvire, Cornell University |