## SUNDAY, AUGUST 4, 2024

| **Pre-Conference Activities** | |
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| **8:00 AM - 12:30 PM** | Bruker Solid-State NMR Workshop |
| **1:00 PM - 3:30 PM** | EPR Educational: Hyperfine Spectroscopy and Optically Detected Magnetic Resonance |
| **4:30 PM – 6:00 PM** | Poster Mixer |
| ***Chair: Rachel Martin*** | |
| **7:00 PM** | **Unraveling Threads in Bacterial Cell Walls by Cell-Wall and Whole-Cell NMR**, Lynnete Cegelski, Stanford University |
| **7:30 PM** | **Using NMR to Deconstruct Melanin Virulence in a Fungal Macromolecular Composite.** Ruth E. Stark, CUNY City College of New York |
| **7:50 PM** | **Magnetically Aligned Peptoid Macrodiscs and (15N, 13C, 1H) Triple-resonance Experiments for Structure Determination and Spectroscopic Assignment of Membrane Proteins.** Alexander A. Nevzorov , North Carolina State University |
| **8:10 PM** | **SHALL WE PLAY A GAME? Monte Carlo Simulations of Structure Selection and Refinement in NMR Crystallography.** Leonard J. Mueller, University of California - Riverside |
| **8:30 PM** | **Trials & Tribulations of Tin-containing Metal Halide Perovskite Materials.** Vladimir K. Michaelis, University of Alberta |

## MONDAY, AUGUST 5, 2024

| ***Chair: Bjorn Corzilius*** | |
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| **8:00 AM** | **$^{19}$F-Enhanced Solid-State NMR for Structure Determination of Viral Membrane Proteins**, Mei Hong, Massachusetts Institute of Technology |
| **8:30 AM** | **Unraveling the Dynamics and Residual Structure of the Flexible Domains of α-Synuclein Fibrils and Monomers**. Sayuri Pacheco, Keck School of Medicine of USC |
| **8:50 AM** | **Magnetic Susceptibility Modeling of Magic-Angle Spinning Modules for Part Per Billion Scale Field Homogeneity**. Jasmin Schönzart, Colorado School of Mines and PhoenixNMR, LLC |
| **9:10 AM** | **Structure and Packing in Complex Polymer Materials.** Ulrich Scheler, Leibniz-Institut für Polymerforschung Dresden e.V. |
| **9:30 AM** | *Break* |
| **10:00 AM** | **Advances in NMR and Magnetometry to Probe the Structure and Redox Properties of Battery Cathodes**. Raphaële Clément, University of California Santa Barbara |
| **10:30 AM** | **Using EPR (with NV-diamonds) for Nano- and Microscale NMR Spectroscopy.** D. B. Bucher, Technical University of Munich |
| **10:50 AM** | **Results and a Pathway Towards Widely Available Pulsed DNP and NMR at 100 Tesla**, Alexander B. Barnes, ETH Zurich |
| **11:30 PM** | *Lunch (included with registration)* |
| ***Chair: Galia Debelouchina*** | |
| **1:00 PM** | **TBA.** Chris Jaroniec, The Ohio State University |
| **1:30 PM** | **Characterizing the Dynamics of the Small Heat Shock Protein HSPB1 in the Presence of a Phase-separated Protein Client**. Alexander P. Plonski, University of California, San Diego |
| **1:50 PM** | **Molecular Dynamics of Proline Derivatives as Possible Source for Site Specificity by DNP**. Florian Taube, University of Rostock |
| **2:10 PM** | **Structural Characterization of Surface Immobilized Platinum Hydrides by Sensitivity-Enhanced $^{195}$Pt Solid State NMR Spectroscopy and DFT Calculations**. Benjamin A. Atterberry, Iowa State University |
| **2:30 PM** | **17O Isotopic Labeling Using Mechanochemistry: Applications to Biomaterials**. D. Laurencin, CNRS |
| **3:00 PM** | *Break* |
| ***Chair: Rachel Martin*** | |
| **3:30 PM** | **Zero-Field Nuclear Quadrupole Resonance to Ultrahigh-Field Nuclear Magnetic Resonance (and Everything in Between) Characterization of Non-Covalent Interactions in Solids**. David L. Bryce, University of Ottawa |
| **4:00 PM** | **Orientation-Dependent NMR Studies of Charge Orders in Kagome Lattices.** Xiaoling Wang, California State University East Bay |
| **4:20 PM** | **Multinuclear Solid-State NMR Studies of Plasmonic Semiconducting Nanocrystals**. Robert B. Smith, Florida State University |
| **4:40 PM** | **Magic-Angle Spinning Insert for Solid-State Nuclear Magnetic Resonance using Solution-State Probes**. N. Alaniva, ETH-Zürich |
| **5:00 PM** | **Diamond Rotors**. Robert G. Griffin, MIT |

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| **5:30-7:00 PM** | *Conference Reception (included with registration)* |
| **Posters** | |
| **7:00-9:30 PM** | **Authors Present for Posters Labeled A** |

## TUESDAY, AUGUST 6, 2024

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| **Joint Session - EPR & SSNMR - EPR CoChair: Songi Han and SSNMR CoChair: Joanna Long** | |
| **8:00 AM** | **Plenary and IES Award:** Christiane Timmel, University of Oxford |
| **8:50 AM** | **MAS NMR of Amorphous Calcium Carbonate Provides Proof for the Pre-nucleation Cluster Pathway**. Guinevere Mathies, Universität Konstanz |
| **9:20 AM** | **High Precision Quantum Sensing with EPR Relaxometry in Flowing Microdroplets**. Ashok Ajoy, University of California Berkeley |
| **9:40 AM** | **Optimal Control DNP Experiments**. Niels C. Nielsen, Aarhus University |
| **10:00 AM** | Break |
| **Joint Session - EPR & SSNMR - EPR CoChair: Songi Han and SSNMR CoChair: Joanna Long** | |
| **10:20 AM** | **EPR Spectroscopy at the Interface with NMR.** Marina Bennatti, Max Planck Institute for Multidisciplinary Science andUniversity of Goettingen |
| **10:50 AM** | **Controlling Properties of High Surface Area Functional Materials**. Daniel Lee, The University of Manchester and Université Grenoble Alpes |
| **11:20 AM** | **High-Field Magic Angle Spinning EPR Spectroscopy**. Ilia Kaminker, Tel-Aviv University |
| **11:40 AM** | **Coherent Dynamic Nuclear Polarization at 94 GHz**. Yifan Quan, Massachusetts Institute of Technology |
| **12:00 PM** | *Lunch (included with registration)* |
| ***Vaughan Lecture - Chair: Christian Bonhomme*** | |
| **1:30 PM** | **Paramagnetic Metal Ions DNP: Mechanisms and Applications in Inorganic Solids.** Anne Lesage, Université de Lyon |
| **2:30 PM** | **From Surface Site Structures to Reactivity Descriptors using Solid-State NMR**, Christophe Copéret, ETH Zurich |
| **3:20 PM** | *Break* |
| ***Vaughan Lecture - Chair: Christian Bonhomme*** | |
| **3:50 PM** | **Paramagnetic Metal Ions DNP: Mechanisms and Applications in Inorganic Solids**, Michal Leskes, Weizmann Institute |
| **4:40 PM** | **Expanding the Tool Box for Structural Biology: 19F Dynamic Nuclear Polarization for Protein Assemblies and Proteins in Cellular Environments.** Tatyana Polenova, University of Delaware |
| **5:30 PM - 7:00 PM** | ***Dinner on your own*** |
| **Posters** | |
| **7:00-9:30 PM** | **Authors Present for Posters Labeled B** |

## WENESDAY, AUGUST 7, 2024

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| ***Chair: Ulla Gro-Nielsen*** | |
| **8:00 AM** | **Ultrafast Laplace NMR to Study Fluid Dynamics in Soft and Solid Materials,** Ville-Veikko Telkki, University of Oulu |
| **8:30 AM** | **Understanding Structure & Dynamics in Anti-Perovskite Solid Electrolytes**. George E. Rudman, Durham University and Newcastle University |
| **8:50 AM** | **Direct Access to Ultralow $Li^+$ Jump Rates in Single Crystalline $Li_3N$ by Evolution-Time-Resolved $^7Li$ Spin-Alignment Echo NMR**. H. Martin R. Wilkening, Graz University of Technology |
| **9:10 AM** | **Intrinsic Disorder in Amyloid Fibrils: A Combined NMR, EPR, and MD Approach.** Ansgar B. Siemer, University of Southern California |
| **9:30 PM** | *Break* |
| ***Chair: Galia Debelouchina*** | |
| **10:00 AM** | **NMR Structural Analysis in the Native State: Membrane Proteins in Extracellular Vesicles.** Francesca Marassi, Medical College of Wisconsin |
| **10:30 AM** | **Experimentally Varying the Relative Importance of Dipolar Coupling Versus Perturbations for the Study of Decoherence in Quantum Dynamics.** Ana K. Chattah, Ciudad Universitaria |
| **10:50 AM** | **The Impact of Microwave Phase Noise on Optically Detected Magnetic Resonance Spectroscopy with Diamond NV Centers**. Andris Berzins, CHTM of University of New Mexico |
| **11:10 AM** | **Band-by-band Contributions to Chemical Shielding: Towards Understanding the Anomalous Trends in 3-5 Semiconductors**. Josef W. Zwanziger, Dalhousie University |
| **11:30 PM** | *Lunch (included with registration)* |

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| ***Chair: Amir Goldbourt*** | |
| **1:00 PM** | **New Recoupling Techniques for Non-ideal Membrane Protein Samples**. Loren B. Andreas, Max Planck Institute |
| **1:30 PM** | **Nitroxide Biradicals for Targeting Lipid Rafts by DNP-NMR**. Ancy T. Wilson, University of Iceland |
| **1:50 PM** | **Polarization Transfer in Metal-ion DNP: Spin Diffusion vs. Direct Polarization**. Ilia B. Moroz, Weizmann Institute of Science |
| **2:10 PM** | **Solid-State NMR Spectroscopy of Low-Gyromagnetic Ratio Half-Integer Quadrupolar Nuclei using Indirect Detection and High Magnetic Fields**. Amrit Venkatesh, National High Magnetic Field Laboratory, Florida State University |
| **2:30 PM** | *Break* |
| ***Chair: Pierre Florian*** | |
| **3:30 PM** | **Methyl-Driven Overhauser Effects, Classical or Quantum Mechanical?** Frédéric A. Perras, Ames National Laboratory |
| **4:00 PM** | **Enhancing Room Temperature MAS-DNP with BDPA-Coated HPHT Diamond**. Celeste Tobar, Northwestern University |
| **4:20 PM** | **The Design and Implementation of a DNP-NQR Spectrometer**. Adam R. Altenhof, Los Alamos National Laboratory |
| **4:40 PM** | **Elucidating Lithium-ion Surface Adsorption on Electrode Materials using 7Li Dark-State Exchange Saturation Transfer NMR Spectroscopy.** Shakked Schwartz, Weizmann Institute of Science |
| **5:00 PM** | **Comparison of Infectious and Non-infectious Prions by MAS NMR**. Kurt W. Zilm, Yale University |
| **7:00-9:00 PM** | **Conference Banquet & Awards Ceremony** (Enjoy an evening of comradeship, fine food and recognition of peers. Pre-registration required.) Speaker – Thomas Prisner |

## THURSDAY, AUGUST 8, 2024

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| ***Chair: Ulla Gro-Nielsen*** | |
| **8:00 AM** | **Assignment Procedures and Difference Spectroscopy for Low Complexity Protein Domain Assemblies**, Dylan T. Murray, University of Connecticut |
| **8:30 AM** | **Observation of $^{1}$H-$^{1}$H J-Couplings in Fast MAS Solid-State NMR**. Daria Torodii, EPFL |
| **8:50 AM** | **Low-Temperature DNP-Enhanced Solid-State NMR Spectroscopy Applied to Liquid-Liquid Phase Separation of the FUS Low-Complexity Domain,** C. Blake Wilson, National Institutes of Health |
| **9:10 AM** | **Lipid Regulation of GPCR dynamics and Ligand-Receptor Association**. Benjamin J. Wylie, Texas Tech University |
| **9:30 PM** | *Break* |
| ***Chair: Aaron Rossini*** | |
| **10:00 AM** | **A Fused Way to Probes and Parts for NMR**. Jörn Schmedt auf der Günne, Siegen University |
| **10:30 AM** | **Following the Transient Reactions in Lithium-Sulfur Batteries Using a Combination of Operando Solid-State 7/6Li and 33S NMR Spectroscopy**. Jana B. Fritzke, University of Cambridge |
| **10:50 AM** | **CLASSIC NMR Spectroscopy to Investigate the ADOR Process**. Nicole L Kelly, University of St Andrews |
| **11:10 AM** | **Resolving Structures of Paramagnetic Systems in Chemistry and Materials Science by Ultra-fast Solid-state MAS NMR.** Jonas Koppe, CRMN (CNRS / ENS Lyon / UCB Lyon) |