51ST Rocky Mountain Conference on Analytical Chemistry
Solid-State NMR Symposium
Poster Presentations

Monday, July 20: 7:30-9:30 p.m. ***(Poster Session A)***

Tuesday, July 21: 7:30-9:30 p.m. ***(Poster Session B)***

A	**$^{6/7}$Li and ^{31}P Solid State NMR Studies of the Olivine Phosphate Family of Cathode Materials.** Linda J.M. Davis, Danielle L. Smiley and Gillian R. Goward, McMaster University; Ivo Heinmaa, National Institute of Chemical Physics and Biophysics
B	**Dynamics and Distribution of Counterions in Polyelectrolyte Complexes.** Susanne Causemann, Monika Schönhoff and Hellmut Eckert, Westfälische Wilhelms-Universität Münster
A	**Phosphonic Acid Based Ionomers As Fuel Cell Membranes.** B. Fassbender, L. Jimenez, M. Klapper, G. Brunklaus and H.W. Spiess, Max Planck Institute for Polymer Research
B	**Nuclear Magnetic Resonance Studies of Nanoscale $NaAlH_4$ Inside Metal Organic Frameworks.** Raghunandan K. Bhakta, Richard Behrens, Jr. and Mark D. Allendorf, Sandia National Laboratories; Julie L. Herberg, Lawrence Livermore National Laboratories; Eric H. Majzoub, University of Missouri
A	**Li-Argyrodites: Insights into a New Exciting Ion Conductor.** Barbara Koch and H. Eckert, Westfälische Wilhelms-Universität Münster; S. T. Kong, C. Reiner and H. J. Deiseroth, University of Siegen
B	**The Straightness of Nanochannels in Nafion Studied by ^{2}H NMR.** Xueqian Kong and Klaus Schmidt-Rohr, Iowa State University
A	**Solid-State NMR Study of the Mechanism of Thermal Reactions Involving Hydrogen Storage Materials.** Jerzy W. Wiench, Oleksandr Dolotko, Vitalij K. Pecharsky and Marek Pruski, Iowa State University
B	**Coordination Motifs of Ions in Polymer and Composite Electrolytes: A Solid-State NMR Study.** Thomas K.-J. Koester and Leo van Wuellen, Westfälische Wilhelms-Universität Münster
A	**Garnet Structures as Solid State Electrolytes for Lithium Ion Batteries.** Leigh Spencer, Tyler S. Russel and Gillian R. Goward, McMaster University; Venkataraman Thangadurai, University of Calgary
B	**Multinuclear Solid-State NMR Studies of Polymer Supported Scandium Based Catalysts.** Marcel P. Hildebrand, Aaron J. Rossini and Robert W. Schurko, University of Windsor; Paul Hazendonk, University of Lethbridge
A	**Characterization of Metallocene Based Olefin Polymerization Catalysts by Solid-State ^{91}Zr and ^{35}Cl NMR** Aaron J. Rossini and Robert W. Schurko, University of Windsor; Andrew S. Lipton and Paul D. Ellis, Pacific Northwest National Laboratory; Christophe Copéret, Université de Lyon
B	**^{93}Nb Solid-Sate NMR Study on Layered Niobates KNb_3O_8 and $K_4Nb_6O_{17}$.** Ting Liu and Luis J. Smith, Clark University
A	**Evidence for the Co-existence of Distorted Tetrahedral and Trigonal Bipyramidal Aluminium Sites in $SrAl_{12}O_{19}$ from ^{27}Al NMR Studies.** K. Harindranath, K. Anusree Viswanath, T. G. Ajithkumar and P.A. Joy, National Chemical Laboratory; Vinod Chandran and Thomas Brauninger, MPI for Solid State Research; P.K. Madhu, Tata Institute of Fundamental Research

B	**Ultra-Broadline ^{139}La NMR of Lanthanum Titanate and Lanthanum Phosphate Systems Capable of Lanthanide and Actinide Nuclear Waste Immobilisation** Thomas A. Partridge, Kevin J. Pike, Mark E. Smith and John V. Hanna, University of Warwick.
A	**Understanding the Protection Mechanism of Nafion /Manganese Oxide Composite Attacked by Free Radicals.** Chuan-Yu Ma and Gillian R. Goward, McMaster University
B	**^{93}Nb NMR Studies of the Exfoliated Layered Niobate, $HCa_2Nb_3O_{10}$.** Sarah J. Pilkenton, Framingham State College; Xuefeng Wang, Ting Liu and Luis J. Smith, Clark University
A	**Application of Solid-State ^{209}Bi NMR to the Structural Characterization of Bismuth-Containing Materials.** Hiyam Hamaed, Michael W. Laschuk and Robert W. Schurko, University of Windsor; Victor V. Terskikh, Steacie Institute for Molecular Sciences
B	**^{31}P NMR Study of Phosphate Salts: Experimental and Computational Comparison** Adrienne M. Roehrich and Gerard S. Harbison, University of Nebraska
A	**Multinuclear NMR Study of Surface Passivated Aluminum Nanoparticles.** Joel B. Miller and Christopher A. Klug, Naval Research Laboratory; R. Jason Jouet, Naval Surface Warfare Center
B	**Spin Coherence Times of Metallofullerenes.** Richard M. Brown, Yasuhiro Ito, Jamie Warner, Arzhang Ardavan, G. Andrew, D. Briggs and John J. L. Morton, Oxford University; Hisanori Shinohara, Nagoya University
A	**Structural Examination of Different Rare Earth Doped Glass Matrices Using Solid-State NMR.** Daniel Mohr and Hellmut Eckert, Westfälische Wilhelms-Universität Münster
B	**National Ultrahigh-Field NMR Facility for Solids.** David L. Bryce, University of Ottawa; Victor Terskikh, Steacie Institute for Molecular Sciences
A	**^{13}C NMR and EPR Studies of Gem Quality Diamonds.** Younkee Paik and Yun Deuk Jang, Korea Basic Science Institute; Jong Rang Kim, Kyungpook National University
B	**Application of NMR and EPR to Understanding High-Temperature Chalcogenide Chemistry.** Matthew A. Gave, Kermit M. Johnson, and David P. Weliky, Michigan State University; Mercouri G. Kanatzidis, Northwestern University
A	**Aggregation Behaviour of Rod-Coil Copolymers Based on Oligoaramides - A Solid-State NMR Study.** A. Bohle, G. Brunklaus and H. W. Spiess, Max Planck Institute for Polymer Research
B	**^{31}P Solid-State NMR Study of Structure and Chemical Stability of Dichlorotriphenylphosphorane.** Nina C. Gonnella, Carl Busacca, Scot Campbell, Magnus Eriksson, Nelu Grinberg, Teresa Bartholomeyzik, Shengli Ma and Daniel L. Norwood, Boehringer Ingelheim Pharmaceuticals Inc.
A	**Monitoring Topochemical Photochemistry in the Solid State in Molecular Crystals and Polymers.** Kimberly Hartstein, Sarah Gresham, and Sophia E. Hayes, Washington University in St. Louis; Marko Bertmer, University of Leipzig
B	**Studies of Solid-State Inclusion Complexes of ß-Cyclodextrin and Some Perfluorinated Guest Molecules.** Abdalla H. Karoyo and Lee D. Wilson, University of Saskatchewan; Alex S. Borisov, Paul Hazendonk, University of Lethbridge
A	**Solid-State ^{15}N NMR Characterization and Oxygen Reduction Reaction Activity of Pyrolyzed Polypyrrole.** Shigeki Kuroki and Junichi Ozaki, Tokyo Institute of Technology; Seizo Miyata, New Energy and Industrial Technology Development Organization
B	**Spin-Dependent Splitting of the GaAs Bandstructure: Fine Structure From a Combination of OPNMR, Magnetoabsorption, and Theoretical Calculations** Sophia E. Hayes, Erika Sesti, Katie Wentz, Dustin Wheeler, Kannan Ramaswamy, Washington University in St. Louis; Scott A. Crooker, National High Magnetic Field Laboratory; Christopher J. Stanton, University of Florida

A	**Calculations of NMR Indirect Nuclear Spin-Spin Coupling Tensors using a New Relativistic Hybrid Density Functional Implementation. Comparison with Experiment for Diatomic Alkali Metal Halides.** David L. Bryce, University of Ottawa; Jochen Autschbach, State University of New York at Buffalo
B	**DNP-Enhanced NMR at 3.4 and 14.1 Tesla With High-Power Microwave Sources.** Kevin J. Pike, Ray Dupree, Andrew P. Howes, Mark E. Newton, Thomas F. Kemp, Eugeny V. Kryukov, Radoslaw M. Kowalczyk, Hiroki Takahashi, James F. MacDonald and Mark E. Smith, University of Warwick; Graham M. Smith and David R. Bolton, University of St. Andrews; Anthony Watts and Marcella Orwick, University of Oxford; Toshitaka Idehara, Fukui University
A	**2D PASS-CPMG and Applications to Modified Silicate Glasses.** Krishna K Dey, Derrick Kaseman, Nicole M Trease and Philip J Grandinetti, Ohio State University; Samantha Farley, Marshall University
B	**De-Pake-ing Transform Analysis of Asymmetric Deuterium Quadrupoles in Organic and Biological Molecules.** Douglas W. Elliott, Walter P. Niemczura and Kristin K. Kumashiro, University of Hawaii
A	**Dynamic Solid-State NMR Line Shapes for High Spin Quadrupoles.** Robert L. Vold and Gina L. Hoatson, College of William and Mary
B	**Amplitude- and Phase-Modulated Excitation Pulses Generated Using Optimal Control in SIMPSON 2.0.** Luke A. O'Dell and Robert W. Schurko, University of Windsor
A	**High Efficient Expression and Purification of Beta Amyloid Peptide (1-40) for Solid-State NMR Studies.** F. Long and Yoshitaka Ishii, University of Illinois at Chicago
B	**Study and Characterization of Crystalline Hydrate and Polymorph Forms of a Reverse Transcriptase Inhibitor by Solid-State NMR Spectroscopy.** N.C. Gonnella, John Smoliga, Scot Campbell, Carl Busacca and Daniel L. Norwood, Boehringer Ingelheim Pharmaceuticals Inc.; Michael Cerreta, Genentech, Inc.; Richard Varsolona, Wyeth Pharmaceuticals
A	**Orientation of Single Anchored WALP Peptides within Lipid Membranes Established by Solid-State NMR Methods.** Johanna M. Froyd-Rankenberg, Denise V. Greathouse and Roger E. Koeppe II, University of Arkansas
B	**^{15}N Cross-Relaxation under MAS in Solid-State NMR.** Elizabeth A. Fry, Van C. Phan and Kurt W. Zilm, Yale University
A	**Characterization of $BMP_{18:1}$/DPPC and DOPG/DPPC Mixtures Using ^{2}H-NMR and EPR.** Philip C. Goff, Thomas E. Frederick, R. Suzanne Farver, Joanna R. Long and Gail E. Fanucci, University of Florida
B	**Membrane Morphology and Thermotropic Phase Behavior of Novel Bis(monoacylglycero)phosphate Analogs.** Thomas E. Frederick, Philip C. Goff, Janetricks N. Chebukati, Joanna R. Long and Gail E. Fanucci, University of Florida; Meng M. Rowland and Michael D. Best, University of Tennessee
A	**Probing Rotational Diffusion in Proteins With ^{13}C Detection in Solid-State NMR With Methyl Alanine Labeled Peptides and Proteins.** Bibhuti B. Das, Chin. H. Wu and Stanley J. Opella, University of California San Diego
B	**Solid-State ^{2}H NMR Analysis of Acylated Lactoferricin Peptides in Oriented Lipid Bilayers.** Denise V. Greathouse, Laura A. Bradney, Nicole McClelland, and Vitaly V. Vostrikov, University of Arkansas
A	**Solid-State NMR Studies of HIV-1 Capsid Protein Assemblies.** Yun Han, Jun Yang and Tatyana Polenova, University of Delaware; Jinwoo Ahn, Jason Concel, In-Ja Byeon and Angela M. Gronenborn, University of Pittsburgh School of Medicine

B	**Site Specific Hydration Effects of Main Cell Wall Potato Pectin Identified by Solid-State ^{13}C Single-pulse MAS and CP/MAS NMR Spectroscopy.** Flemming H. Larsen and Søren B. Engelsen, University of Copenhagen; Inge B. Chrestensen, Iben Damager, Jerome Diaz and Peter Ulvskov, University of Aarhus
A	**Protein Structure Refinement by 3D CCC NMR and Arginine-Water Interaction in Lipid Bilayers by 2D Heteronuclear Correlation Experiments.** Shenhui Li, Yuan Zhang, Yongchao Su, Wenbin Luo and Mei Hong, Iowa State University
B	**Application of Advanced ^{19}F ssNMR Techniques in the Development of Pharmaceuticals.** Mark Strohmeier and Fred Vogt, GlaxoSmithKline
A	**SAS and MAS Investigation of Unusual Lipid Membranes.** Rachel W. Martin, Chris Vanderwal, Rebecca Shapiro, Ilya Litvak and Catalina Espinosa, University of California Irvine
B	**Characterizing Enzymatic Intermediates in Tryptophan Synthase: a Combined Solid-State NMR, X-Ray Crystallographic, and *Ab Initio* Study.** Jinfeng Lai, Ye Tian, Leonard J. Mueller, Dimitri Niks and Michael F. Dunn, University of California Riverside
A	**Backbone Dynamics of Reassembled Thioredoxin Studied by MAS NMR.** Sivakumar Paramasivam and Tatyana Polenova, University of Delaware; Maria Luisa Tasayco, The City College of New York
B	**Site Specific Rotating Frame and Cross Relaxation Measurements in Crystalline Ubiquitin.** Suvrajit Sengupta and Kurt W. Zilm, Yale University; R. Andrew Byrd, National Cancer Institute
A	**Homogeneous Nanoporous Substrates for ssNMR of Lipid Membranes and Membrane Proteins: A Fivefold ^{31}P Line Width Improvement and Fast Lateral Diffusion of Lipids in Nanopores.** Alexander Nevzorov, Antonin Marek, and Alex I. Smirnov, North Carolina State University
B	**Transmembrane Peptide Orientation: Solid-State ^{2}H and ^{15}N NMR Investigation by Complementary Methods.** Vitaly V. Vostrikov and Roger E. Koeppe II, University of Arkansas; Chris V. Grant and Stanley J. Opella, University of California San Diego
A	**Multinuclear Solid-State NMR Investigations of Layered Transition Metal Disulfides at Ultrahigh Magnetic Field.** Andre Sutrisno and Yining Huang, University of Western Ontario; Victor V. Terskikh, Steacie Institute for Molecular Sciences, National Research Council