Presentations (as of August 18)

1. Prize Lecture (PR)

2021 ISMAR Prize Lecture

(PR-1) **FROM SPIN PHYSICS to BRAIN FUNCTION**

Kamil Uğurbil

2021 Abragam Prize Lecture

(PR-2) **NMR Studies of Adsorption and Diffusion in New Materials for CO_2 Capture**

Alexander C. Forse

(PR-3) **Complex Carbohydrates in Intact Plant and Fungal Cell Walls Investigated Using Solid-State NMR and DNP Methods**

Tuo Wang, Alex Kirui, Malitha Dickwella Widanage, Frederic Mentink-Vigier, Xue Kang

Callaghan Lecture 2021

(PR-4) **Life at the Bottom: NMR and MRI at 6.5 mT**

Matthew S. Rosen

IES Silver Medal for Chemistry 2021 Prize Lecture

(PR-5) **Exciting life stories of short- and long-lived radicals: magnetic resonance application in biology and material science**

Elena Bagryanskaya

2. Ernst Memorial Session

Kurt Wüthrich

Kuniaki Nagayama

Annalisa Pastore

Geoffrey Bodenhausen

Marc Baldus

Masatsune Kainosho

Robert G. Griffin

Kazuyuki Akasaka

Jeffrey Reimer

Ad Bax

3. Plenary Lecture (PL)

(PL-1) **Probing Protein Structure with Paramagnetic and Chemical Tags**

Gottfried Otting

(PL-2) **Probing quantum physics and materials with single spins**

Jörg Wrachtrup

(PL-3) **NMR as a Quantum Workshop**

T. S. Mahesh

(PL-4) **Dissolution Dynamic Nuclear Polarization: birth, decline, and awakening**

Sami Jannin

(PL-5) **Pulsed Dipolar EPR Spectroscopy: New methodological developments and new applications to RNA**

Thomas F. Prisner

(PL-6) **Routes to improve tumour detection/characterization by NMR/MRI**

Silvio Aime

(PL-7) **Magnetic Resonance Spectroscopy and T_1/T_2 Relaxation Studies of Electrochemical Processes in Lithium-Ion Batteries**

Gillian R. Goward, Annica Freytag, Zoya Sadeghi, Kevin J. Sanders, Andres Ramírez Aguilera, Bruce J. Balcom

(PL-8) **New NMR Approaches to Study Electrochemical Systems: From Conventional to Redox Flow Batteries to Gated Electronics**

Clare P. Grey

(PL-9) **Structure & Dynamics of Viral and Bacterial Ion Channels and Transporters**

Mei Hong

(PL-10) **Function-related Dynamics of GPCRs**

Ichio Shimada

SOL: Solution NMR
SS: Solid state NMR
HYP: Hyper polarization and emerging fields
MRI: Magnetic resonance imaging
EPR: Electron paramagnetic resonance

4. Parallel Oral Session (PS)

PS1: Protein structures & dynamics [SOL]

(PS1-1) **The use of NMR in an integrated study on regulation of the RAS oncogenic pathway**

Teklab Gebregiworgis, Benjamin Grant, Masahiro Enomoto, Ki-Young Lee, Noboru Ishiyama, Chris Marshall, Mitsu Ikura

(PS1-2) **Protein dynamics at the heart of protein evolution**

Alejandro J. Vila, Juliana Delmonti, Lisandro J. González

(PS1-3) **Visualizing the Transient Druggable Conformations of Inactive Ras by Solution NMR**

Dong Long

(PS1-4) **A Free Energy Landscape of T4 Lysozyme L99A Studied by Pressure-Dependent H/D Exchange and Relaxation Dispersion NMR**

Ryo Kitahara, Mengjun Xue, Frans A. A. Mulder

PS2: Bacteria, enzyme & virus [SS]

(PS2-1) **Fast Biomolecular NMR with Fast MAS (Without and With DNP)**

Guido Pintacuda

(PS2-2) **New Discoveries in Bacterial Polysaccharides and Biofilms Enabled by Solid-state NMR Spectroscopy**

Lynette Cegelski

(PS2-3) **Slow Conformational Dynamics of the Protein-Water Network of a Prototypical "Rigid" Drug Target**

Himanshu Singh, Chandan K. Das, Suresh K. Vasa, Lars V. Schäfer, Rasmus Linser

(PS2-4) **Water Orientation and Dynamics in the Closed and Open Influenza B Virus M2 Proton Channels**

Martin D. Gelenter, Venkata S. Mandala, Michiel J.M. Niesen, Dina A. Sharon, Aurelio J. Dregni, Adam P. Willard, Mei Hong

PS3: Field cycling & qMRI [MRI]

(PS3-1) **Short T_2 Relaxation Correlation and MRI Measurement**

Bruce J. Balcom

(PS3-2) **Fast Field-Cycling Magnetic Resonance Imaging**

David J. Lurie, Lionel M. Broche, Gareth R. Davies, Mary Joan Macleod, P. James Ross, Robert Stormont

(PS3-3) **More than just a picture: the role of standards to make MRI quantitative**

Kathryn E. Keenan, Megan E. Poorman, Kalina V. Jordanova, Michele Martin, Karl F. Stupic, Zydrunas Gimbutas, Stephen E. Russek, Andrew Dienstfrey

(PS3-4) **Low field NMR Relaxometry for Intraoperative Tumour Margin Assessment in Breast-Conserving Surgery**

Valeria Bitonto, Maria Rosaria Ruggiero, Alessandra Pittaro, Isabella Castellano, Silvio Aime, Simona Baroni, Simonetta Geninatti Crich

PS4: Protein dynamics [SOL]

(PS4-1) **NMR study on chemokine polymer**

Shih-Che Sue

(PS4-2) **Targeting the cryptic sites: NMR-based strategy to improve protein druggability by controlling the conformational equilibrium**

Koh Takeuchi, Yumiko Mizukoshi, Yuji Tokunaga, Ichio Shimada

(PS4-3) **Oligomeric assembly regulating mitochondrial HtrA2 function as examined by methyl-TROSY NMR**

Yuki Toyama, Robert W. Harkness, Tim Y. T. Lee, Jason T. Maynes, Lewis E. Kay

(PS4-4) **Characterization of Folding of Peripheral Myelin Protein 22 and Its Disease Mutant Forms by NMR Spectroscopy**

Geoffrey Li, Charles R. Sanders

PS5: Amyloid [SS]

(PS5-1) **Millisecond Time-Resolved Solid-State NMR of Biomolecular Systems**

Robert Tycko, Jaekyun Jeon, C. Blake Wilson, Kent R. Thurber, Wai-Ming Yau

(PS5-2) **Progress in Sensitivity-Enhanced Protein Solid-state NMR using Ultra-fast MAS and Revealing Novel Polymorphs for 42-residue Amyloid β and other systems**

Yoshitaka Ishii

(PS5-3) **Effect of Aβ-42 Oligomers on the Aggregation of Aβ-40 Monomers**

Han-Wen Chang, Ho I Ma, Yi-Shan Wu, Jerry C. C Chan

(PS5-4) **The Amyloid Structure of RIPK3 (Receptor Interacting Protein Kinase 3) of mouse and human in Cell Necroptosis**

Jun-xia Lu, Xia-lian Wu, Hong Hu, Xing-qi Dong, Jing Zhang, Jian Wang, Charles D. Schwieters, Jing Liu, Guo-xiang Wu, Bing Li, Jing-yu Lin, Hua-yi Wang

PS6: Photo-excited DNP [HYP]

(PS6-1) **Exploiting Quantum Entanglement of Electron Spins in Photogenerated Radical Pairs**

Michael R. Wasielewski

(PS6-2) **Triplet Dynamic Nuclear Polarization of Biomolecules with Porphyrins as Novel Polarizing Agents**

Tomoyuki Hamachi, Koki Nishimura, Hironori Kouno, Yusuke Kawashima, Kenichiro Tateishi, Tomohiro Uesaka, Nobuo Kimizuka, Nobuhiro Yanai

(PS6-3) **Enhanced Nuclear-Spin Hyperpolarization of Amino Acids and Proteins via Reductive Radical Quenchers and Selective Isotope Labeling**

Silvia Cavagnero, Hanming Yang, Clayton A. Mickles, Justin H. Dang, Kenji Sugisaki

(PS6-4) **Triplet Dynamic Nuclear Polarization in Nanoporous Metal-Organic Frameworks**

Saiya Fujiwara, Kenichiro Tateishi, Tomohiro Uesaka, Keiko Ideta, Nobuo Kimizuka, Nobuhiro Yanai

PS7: Protein structures & interactions (Atreya Memorial Session) [SOL]

(PS7-1) **Structural And Functional Studies of Human Regulator of Telomere Elongation Helicase 1**

Mahavir Singh, Parthasarthy Manikandan, Niranjan Kumar

(PS7-2) **Conformational dynamics and receptor interactions of disulfide-rich peptides**

Raymond S. Norton, Karoline Sanches, Dorothy C. C. Wai

(PS7-3) **An integrated tool for highly automated and accurate analysis of NMR assisted by Deep Neural Networks**

Naohiro Kobayashi, Toshihiko Sugiki, Koya Sakuma, Shintaro Minami, Koh Takeuchi, Toshio Nagashima, Chojiro Kojima, Toshimichi Fujiwara, Takahiro Kosugi, Rie Koga, Nobuyasu Koga, Toshio Yamazaki, Yoshitaka Ishii

(PS7-4) **Local Disorder of Transthyretin Modulates Its Aggregation-Prone Propensity**

Jin Hae Kim

PS8: Proteins & membrane [SS]

(PS8-1) **MAS Above 100 kHz: A Membrane Protein in Outer Membrane and a Bacterial Toxin Injection Machinery**

Hartmut Oschkinat, Florian Lindemann, Daniel Friedrich, Massilia Abbas, Anne Diehl, Nils Cremer, Dirk Linke, Stefan Raunser, Marcella Orwick Rydmark, Alexander Belyy, Daniel Roderer, Jayasubba Yarava, Lisa Gerland, Matthias Herrera Glomm

(PS8-2) **Cellular solid-state NMR spectroscopy: Recent progress and applications**

Marc Baldus

(PS8-3) **Novel nanodiscs for atomic-resolution structure and dynamics studies on membrane proteins by NMR**

Ayyalusamy Ramamoorthy, Thirupathi Ravula, Krishnarjuna Bankala

(PS8-4) **Structural biology of functional amyloids by solid-state NMR**

Antoine Loquet

PS9: DNP for solution samples 1 [HYP]

(PS9-1) **Targeting Precision Measurements, Portable NMR and Molecular Imaging with Parahydrogen Induced Polarization**

Thomas Theis

(PS9-2) **Protein Structure, Dynamics and Folding Viewed Through Hyperpolarized NMR**

Christian Hilty, Jihyun Kim, Ratnamala Mandal, Pierce Pham, Chang Qi, Yunyi Wang

(PS9-3) **2-Field SABRE: Enhanced hyperpolarization from non-intuitive field sequences**

Shannon Eriksson, Jacob Lindale, Warren Warren

(PS9-4) **Solution DNP at 14 T Using a Novel, Large Volume, Double Resonance NMR Probe**

Murari Soundararajan, Thierry Dubroca, Stephen Hill, Lucio Frydman, Sungsool Wi

PS10: Dynamical exchanges in proteins [SOL]

(PS10-1) **Protein Conformational Exchange Induced by Transient Protein-membrane Interactions**

Yimei Lu, Daiwen Yang

(PS10-2) **Capturing the High-Resolution Structure of a Low-Populated Aromatic Ring Flipping Intermediate**

Laura Mariño Pérez, Francesco S. Ielasi, Luiza M. Bessa, Damien Maurin, Jaka Kragelj, Martin Blackledge, Nicola Salvi, Guillaume Bouvignies, Andres Palencia, Malene Ringkjøbing Jensen

(PS10-3) **Deciphering Electron Flow in Neisserial DsbD Enzyme by NMR Dynamics**

Stefan Nebl, Roxanne P. Smith, Bradley C. Doak, Gaurav Sharma, Martin L. Williams, Begoña Heras, Biswaranjan Mohanty, Martin J. Scanlon

(PS10-4) **Necrosome Core Assembly Studied by Nuclear Magnetic Resonance Spectroscopy**

Chi L. L. Pham, Margaret Sunde, Miguel Mompeán

PS11: Emerging techniques 1 [HYP]

(PS11-1) **ZULF-TOCSY: New Mixing Block for High-resolution Heteronuclear Correlation Spectroscopy Using Ultralow Magnetic Fields**

Alexey Kiryutin, Ivan Zhukov, Fabien Ferrage, Geoffrey Bodenhausen, Gerd Buntkowsky, Alexandra Yurkovskaya, Konstantin Ivanov

(PS11-2) ***Ex-Situ* Time-Resolved Investigation of Nucleation and Crystallisation of Polymorphic Molecular Solids *via* Solid-State DNP NMR**

Giulia Mollica, Marie Juramy, Romain Chevre, Fabio Ziarelli, Eric Besson, Stephane Gastaldi, Stephane Viel, Kenneth D. M. Harris, Pierre Thureau

(PS11-3) **Spin-Contrast-Variation Small-Angle Scattering, Reflectometry, and Diffractometry Using Polarized Neutrons and Proton-Polarized Samples**

Takayuki Kumada, Daisuke Miura

(PS11-4) **Recent Progress in β-NMR at CERN**

Beatrice Karg, Katarzyna M. Dziubinska-Kühn, Marcus Jankowski, Nikolay Azaryan, Jared Croese, Stuart Warren, Andrej Antušek, Magdalena Kowalska

PS12: New methods 1 [EPR]

(PS12-1) **Understanding Electron Spin Decoherence in Glassy Matrices by Dynamical Decoupling and Noise Spectroscopy**

Janne Soetbeer, Miriam Hülsmann, Adelheid Godt, Yevhen Polyhach, Gunnar Jeschke

(PS12-2) **Application of spherical harmonics for DEER data analysis in systems with conformational distribution**

Alexey Potapov

(PS12-3) **Reviving 3-pulse DEER from the dead(time) using milliwatt powers**

Markus Teucher, Jason W. Sidabras, Mian Qi, Adelheid Godt, Alexander Schnegg

(PS12-4) ***In vitro* and in cell Hsp90 conformations combining Mn(II), Gd(III) and nitroxide labels**

Angeliki Giannoulis, Akiva Feintuch, Tamar Unger, Yoav Barak, Shiran Amir, Shira Albeck, Daniella Goldfarb

PS13: Interactions [SOL]

(PS13-1) **Molecular Chaperones in Health and Disease - What we can learn by NMR**

Guy Zoltsman, Lieu Dang, Anne Wentink, Bernd Bukau, Rina Rosenzweig

(PS13-2) **Insights into the Mechanism of a Specific NF-kappaB Dimer Formation**

Sulakshana P. Mukherjee, Manish Kumar, Nitin Dhaka, Tahseen Raza

(PS13-3) **NMR characterization of Non-pathogenic and Pathogenic forms of Huntingtin Poly-Q Homorepeat**

Carlos Elena-Real, Annika Urbanek, Matija Popovic, Amin Sagar, Anna Morato, Alejandro Estana, Aurelie Fournet, Xamuel L. Lund, Geraldine Levy, Aurelien Thureau, Frederic Allemand, Juan Cortes, Davy Sinnaeve, Nathalie Sibille, Pau Bernado

(PS13-4) **Mechanism of Tau R3 Aggregation and Inhibition Revealed by NMR-based Chemical Kinetics**

Virginia Casablancas-Antras, Sylvain Demanze, Gary Sharman, Caroline Kerridge, Suchira Bose, Andrew J. Baldwin

PS14: Emerging techniques 2 [HYP]

(PS14-1) **Exploring NMR through Mechanics and Optics**

Kazuyuki Takeda

(PS14-2) **MRI of Monoatomic Spin Systems with Nuclear Electric Quadrupole Moment**

Galina Pavlovskaya, Arthur Harrison, Max Filikns, Sean Rigby, Xinpei Wang, Chengbo Wang, Thomas Meersmann

(PS14-3) **Digital Microfluidics-NMR Interface: the Next Generation Microvolume Chemical Reaction Monitoring Platform**

Bing Wu, Ian Swyer, Sebastian von der Ecken, Chunliang Li, Amy Jenne, Franck Vincent, Daniel Schmidig, Till Kuehn, Armin Beck, Falko Busse, Henry Stronks, Ronald Soong, Aaron R. Wheeler, Andre Simpson

(PS14-4) **Nonlinear Magnetization Dynamics of DNP-Hyperpolarized Spins at Cryogenic Temperatures: Experiments, Simulations and Control**

Vineeth Francis Thalakottoor Jose Chacko, Alain Louis-Joseph, Daniel Abergel

PS15: Battery & semiconductor 1 [SS]

(PS15-1) **Inside-out MRI and magnetometry for battery diagnostics**

Alexej Jerschow

(PS15-2) **NMR and MRI Studies of Catalytic Processes**

Igor V. Koptyug

(PS15-3) **Tetrel Bonds Studied via Solid-State NMR**

Scott A. Southern, Vijith Kumar, Michael S. West, Maressa J. Z. Bradshaw, Carl Rodrigue, David L. Bryce

PS16: Viruses [SOL]

(PS16-1) **RDCs Provide New Information About SARS-CoV-2 Proteins**

Angus Robertson, Sai C. Chiliveri, Charles Schwieters, Jinfa Ying, Ad Bax

(PS16-2) **NMR Studies of Cap-Dependent HIV-1 Genome Packaging**

Michael F. Summers, Pengfei Ding, Siarhei Kharytonchyk, Nansen Kuo, Emily Cannistraci, Hana Flores, Ridhi Chaudhary, Mitali Sarkar, Xinmei Dong, Alice Telesnitsky

(PS16-3) **Interactions of SARS-CoV-2 Envelope Protein with Amilorides and its Correlation with Antiviral Activity**

Sang Ho Park, Haley Siddiqi, Daniela V. Castro, Anna A. De Angelis, Aaron L. Oom, Charlotte A. Stoneham, Mary K. Lewinski, Alex E. Clark, Ben A. Croker, Aaron F. Carlin, John Guatelli, Stanley J. Opella

(PS16-4) **Free Energy Landscape of Molecular Recognition Between Host Proteins and NS1 Proteins of Influenza Viruses**

Iktae Kim, Alyssa Dubrow, Elias Topo, Jae-Hyun Cho

PS17: Hardware [SS]

(PS17-1) **A cryogen-free magnet for multiple field (zero to 14.1 T) solid state MAS NMR applications**

Eugeny Kryukov, Seema Raghunathan, Stephen Burgess, Paul Jonsen, Jeremy Good

(PS17-2) **Millisecond Temperature Drop-Induced Protein Folding and Oligomerization Captured With Time-Resolved Dynamic Nuclear Polarization-Enhanced Solid-State NMR**

C. Blake Wilson, Wai-Ming Yau, Robert Tycko

(PS17-3) **Magic Angle Spinning Spheres**

Pin-Hui Chen, Chukun Gao, Michael A. Urban, Lauren E. Price, Thomas M. Osborn Popp, Nicholas Alaniva, Alexander Däpp, Ronny Gunzenhauser, Alexander B. Barnes

(PS17-4) **Portable Proteus Magnet Design and Laminar Flow Velocity Profiles Determination**

Jiangfeng Guo, Michael M.B. Ross, Benedict Newling, Bruce J. Balcom

PS18: DEER 1 [EPR]

(PS18-1) **New Spin Labelling Tools For Applications In Structural Biology**

Nicholas Cox, Martyna Judd, Elwy Abdelkader, Gottfried Otting, Anton Savitsky

(PS18-2) **Utilizing EPR spectroscopy and computational modelling to evaluate the mechanism underlying pathogen metal transcription activators and de-repressors**

Sharon Ruthstein

(PS18-3) **Cleavage-resistant Protein Labeling with Hydrophilic Trityl Enables Distance Measurements In-Cell**

Zikri Hasanbasri, Kevin Singewald, Teresa D. Gluth, Benoit Driesschaert, Sunil Saxena

(PS18-4) **Analysis on Cold Adaptation Mechanism of Metalloenzyme by X-ray Crystallography and EPR Spectroscopy Combined with Rapid Freeze-Quench**

Masaki Horitani, Yuri Kasu, Hiroshi Sugimoto, Keiichi Watanabe

PS19: Measurements & analyses [SOL]

(PS19-1) **Improving the Quantitative Aspect of 2D ^{1}H-^{13}C HSQC by Spatial Encoding of the Polarization Transfer periods**

Bikash Baishya, Rashmi Parihar, Rajeev Verma, Ajay Verma

(PS19-2) **Rheological Alignment and Tensorial Constraints: Novel Techniques for Catching Flexibility in Molecules**

Burkhard Luy

(PS19-3) **Development of Ultrahigh-Resolution NMR Experiments for the Investigation of Intrinsically Disordered Proteins**

Jonghyuk Im, Sohyun Jung, Kyungryun Lee, Jung Ho Lee

(PS19-4) **Multiple Receivers and NMR Supersequences – Increasing Sensitivity and Speed of Data Acquisition in NMR**

Ēriks Kupče, Jonathan R. J. Yong, Alexandar L. Hansen, Tim D. W. Claridge

PS20: Gene & cell [SS]

(PS20-1) **In-Cell Sensitivity-Enhanced NMR of Intact Living Mammalian Cells**

Kendra K. Frederick, Rupam Ghosh, Yiling Xiao, Jaka Kragelj

(PS20-2) **MAS NMR studies of heterochromatin interactions and dynamics**

Galia Debelouchina, Bryce Ackermann, Nesreen Elathram

(PS20-3) **Understanding Antibiotics with solid-state NMR**

Markus Weingarth

PS21: NV center [HYP]

(PS21-1) **Generation and Transport of Nuclear Spin Hyperpolarization by Cross-Relaxation of Paramagnetic Centers in Diamond**

Pablo R. Zangara, Daniela Pagliero, Rodolfo H. Acosta, Carlos A. Meriles

(PS21-2) **Exploring magnetism at the nanoscale with a single spin microscope**

Vincent Jacques

(PS21-3) **Quantum sensing with optically hyperpolarized nuclei**

Ashok Ajoy

(PS21-4) **Single-particle distance measurements using optical and magnetic resonance methods**

Takuya F. Segawa, Pratyush Anand, Rui Tian, Koichiro Miyanishi, Pol Welter, Dorothea Pinotsi, Frederick T.-K. So, Daiki Terada, Ryuji Igarashi, Masahiro Shirakawa, Christian L. Degen

PS22: Disordered proteins [SOL]

(PS22-1) **Fast Field Cycling Relaxometry in Life Sciences**

Giacomo Parigi

(PS22-2) **The Role of Proline Residues in Intrinsically Disordered Proteins and Proteins' Regions**

Roberta Pierattelli

(PS22-3) **Selective $^{1}H^{\alpha}$ NMR Methods to Reveal Proline *cis/trans* Isomers in IDPs: Minor Forms, Phosphorylation Effects, Occurrence in Proteome**

Andrea Bodor, Fanni Sebák, Péter Ecsédi, Wolfgang Bermel, Burkhard Luy, László Nyitray

(PS22-4) **STRUCTURAL VIEW OF MEMBRANE-TARGETING AND INDUCED UNFOLDING IN THE BTEA-BTCA EFFECTOR-CHAPERONE COMPLEX IN *BORDETELLA***

Jordan H. Chill, Adi Yahalom, Geula Davidov, Hadassa Shaked, Sharon Ruthstein, Raz Zarivach

PS23: Complex materials 1 [SS]

(PS23-1) **Uncovering the Proton Transfer Mechanism in Solid Conductors by Solid State 2H NMR Spectroscopy: from Polyoxometalates to Metal-Organic Frameworks**

Daniil I. Kolokolov

(PS23-2) **Exploiting Isotopic Enrichment in NMR Spectroscopy of Microporous Materials**

Sharon E. Ashbrook

(PS23-3) **Solid-state NMR of Nanostructures: from the surface of nanocrystals to the defects in nanoporous frameworks**

Xueqian Kong

(PS23-4) **Molecular Insights into Industrial Polymers from Solid-State NMR Spectroscopy to Design Biobased Adhesives**

Kash A. Bhullar, Richard Wuhrer, Patrice Castignolles, Marianne Gaborieau

PS24: DNP for solution samples 2 [HYP]

(PS24-1) **Dissolution DNP**

Jan Ardenkjær-Larsen

(PS24-2) **Hyperpolarization-enhanced NMR using parahydrogen-polarized [1-^{13}C]fumarate**

James Eills

(PS24-3) **Mobile Para-Hydrogen Enhanced Magnetic Resonance**

Stefan Glöggler

(PS24-4) **High-field solution state DNP using cross-correlations**

Maria Grazia Concilio, Lucio Frydman, Ilya Kuprov

PS25: IDP & LLPS [SOL]

(PS25-1) **Structural Investigation of anti-CRISPR AcrIIA5 and AcrIF7 for CRISPR Inhibition**

Jeong-Yong Suh

(PS25-2) **Disordered Protein Complexes**

Birthe B. Kragelund

(PS25-3) **NMR Insights into Phase Separation of Intrinsically Disordered Protein Regions of CAPRIN1 and FMRP**

Julie D. Forman-Kay, Tae Hun Kim, Leo Wong, Brian Tsang, Brandon J. Payliss, Michael L. Nosella, Ian T. W. Lee, Yuki Toyama, Lewis E. Kay

(PS25-4) **'Tales' of the Musashi family: how intrinsically disordered regions of proteins mediate their liquid-liquid phase separation**

Jie-rong Huang

PS26: Material science 1 [EPR]

(PS26-1) **Spin-States in MoS_2 Thin-Film Transistors Distinguished by Operando Electron Spin Resonance**

Kazuhiro Marumoto

(PS26-2) **Magnetic Field Effects on Organic Photovoltaic Thin Films as Studied by Simultaneous Optical-Electrical Transient Measurement**

Tomoaki Miura, So Kobayashi, Mariko Yatsushiro, Tadaaki Ikoma

(PS26-3) **Direct Measurements of Singlet Fission Spin Dynamics by 2D Nutation Spectroscopy**

Thomas S. C. MacDonald, Elango Kumarasamy, Samuel N. Sanders, Luis M. Campos, Dane R. McCamey

(PS26-4) **Catalysis by EPR: Examples, Insights and Perspective**

Sonia Chabbra, Bela Bode, Alexander Schnegg

PS27: DNP for solution samples 3 [HYP]

(PS27-1) **ParaHydrogen Hyperpolarized Pyruvate for Molecular Imaging Studies**

Eleonora Cavallari

(PS27-2) **Parahydrogen-Induced Polarization with Heterogeneous Catalysts (HET-PHIP): the Recent Advances**

Dudari B. Burueva, Igor V. Koptyug

(PS27-3) **Metabolic contrast agents produced from transported solid ^{13}C-glucose hyperpolarized via Dynamic Nuclear Polarization**

Andrea Capozzi, Jan Kilund, Magnus Karlsson, Mathilde H. Lerche, Jan Henrik Ardenkjær-Larsen

(PS27-4) **^{1}H Overhauser DNP of Lipids at 9.4 Tesla**

Danhua Dai, Vasyl Denysenkov, Thomas Prisner

PS28: Protein interactions [SOL]

(PS28-1) **Conformational Variation of a Multi-Domain Protein Enzyme Investigated by Paramagnetic Lanthanide Probe**

Tomohide Saio

(PS28-2) **Stable isotope-assisted NMR analysis of dynamics and interactions of the Fc region of immunoglobulin G as glycoprotein**

Saeko Yanaka, Rina Yogo, Hirokazu Yagi, Koichi Kato

(PS28-3) ***De novo* determination of near-surface electrostatic potentials by NMR**

Junji Iwahara

(PS28-4) **Construction of coupled intra- and interdomain protein motion from NMR and EPR**

Beat Vögeli, Alexandra Born, Janne Soetbeer, Frauke Breitgoff, Morkos Henen, Nikolaos Sgourakis, Yevhen Polyhach, Parker Nichols, Dean Strotz, Gunnar Jeschke

PS29: Battery & semiconductor 2 [SS]

(PS29-1) **Insights into Cation-Disordered Rocksalt Oxyfluoride Li-ion Cathodes: A Paramagnetic Solid-State NMR and First Principles Simulations Approach**

Raphaële Clément, Raynald Giovine, Yuefan Ji, Daniil Kitchaev, Emily Foley, Ashlea Patterson, Zhengyan Lun, Bin Ouyang, Jinhyuk Lee, Gerbrand Ceder

(PS29-2) **Surface Characterization of Semiconductor Nanoparticles by MAS Dynamic Nuclear Polarization Solid-State NMR Spectroscopy**

Aaron J. Rossini, Yunhua Chen, Rick W. Dorn, Michael P. Hanrahan, Javier Vela

(PS29-3) **Operando MRI for quantitative mapping of temperature and redox species concentrations in thermo-electrochemical cells**

Luke A. O'Dell, Isuru E. Gunathilaka, Jennifer M. Pringle, Maria Forsyth

(PS29-4) **Hydrogen impurities in ZnO: shallow donors in ZnO semiconductors and active sites for hydrogenation of carbon species**

Xiaolong Liu, Titao Li, Mengye Wang, Mingge Jin, Feng Huang

PS30: In vivo ESR [EPR]

(PS30-1) **Simultaneous mapping of the partial pressure of oxygen, pH and inorganic phosphate using electron paramagnetic resonance**

Akihiro Taguchi, Stephen DeVience, Benoit Driesschaert, Valery V. Khramtsov, Hiroshi Hirata

(PS30-2) **Design and Synthesis of Triarylmethyl Radical Spin Probes for In Vivo Profiling of Tissue Microenvironment by EPR**

Benoit Driesschaert, Martin Poncelet, Justin L. Huffman, Teresa D. Gluth, Valery V. Khramtsov, Timothy D. Eubank

(PS30-3) **SARS-CoV-2 Fusion Peptide has a Greater Membrane Perturbating Effect than SARS-CoV with Highly Specific Dependence on Ca^{2+}: An ESR Study**

Alex L. Lai, Jack H. Freed

(PS30-4) **Gentle Delivery of Stable Nitroxide Into Cells: Real Time Monitoring By EPR**

Elena Bagryanskaya, Sergey Ovcherenko, Olga Chinak, Olesya Krumkacheva, Sergey Dobrynin, Igor Kirilyuk

PS31: Protein structures & interactions [SOL]

(PS31-1) **PROTEIN-PROTEIN INTERACTION AND DYNAMICS OF HUMAN CHROMATIN REMODELING COMPONENTS**

Jeongmin Han, Iktae Kim, Ji-Hye Yun, Jeong-Yong Suh, Weontae Lee

(PS31-2) **Location of the Antimicrobial Peptide Maculatin 1.1 in Model Bacterial Membranes**

Frances Separovic, Anton Le Brun, Shiying Zhu, Marc-Antoine Sani

(PS31-3) **Characterising a Core Metabolic Enzyme Responsible for Phosphine Resistance and Fundamental Metabolic Regulation: From NMR-metabolomics to an International Research Consortium**

Horst Joachim Schirra, Jake Hattwell, Paul R. Ebert, Michael Witting

(PS31-4) **Relaxation optimized SAIL for NMR studies of supramolecular proteins**

Yohei Miyanoiri, Mitsuhiro Takeda, Tsutomu Terauchi, Masatsune Kainosho

(PS31-5) **Role of magnetic anisotropy in paramagnetic relaxation enhancement**

Elizaveta A. Suturina, Markus Enders, Jonas C. Ott, Lutz H. Gade, Joscha Nehrkorn, Alexander Schnegg, Ilya Kuprov

PS32: MAS DNP 1 [HYP]

(PS32-1) **Time Domain DNP at 1.2 T**

T.V. Can, K. O. Tan, C. Yang, R.T. Weber, R.G. Griffin

(PS32-2) **Methods and Instruments for High-Field Dynamic Nuclear Polarization (DNP)-MAS NMR toward Meso-Scale Structural Biology**

Yoh Matsuki, Toshimichi Fujiwara

(PS32-3) **DNP NMR study of the antimicrobial peptide maculatin 1.1 in live *E. coli* bacteria**

Shiying Zhu, Vinzenz Hofferek, David W. Keizer, Frances Separovic, Marc-Antoine Sani

(PS32-4) **DNP-enhanced MQMAS experiment using *D*-RINEPT transfer**

Hiroki Nagashima, Julien Trébosc, Jennifer S. Gomez, Olivier Lafon, Jean-Paul Amoureux

PS33: Spintronics [EPR]

(PS33-1) **Spintronics phenomena with unconventional spintronic materials**

Motoi Kimata

(PS33-2) **Quantifying Power Flow Processes Mediated by Spin Currents in Metal Bilayer Devices**

Katsuichi Kanemoto, Kohei Takaishi, Takayuki Suzuki

(PS33-3) **Novel Quantum Phase Transition of the Shastry-Sutherland System and ESR Forbidden Transition**

Toru Sakai, Hiroki Nakano, Riro Furuuchi

(PS33-4) **Temperature Dependence of EPR Linewidth in $Bi_{0.5}Ca_{0.5}MnO_3$: Classical vs Generalized Berezinskii-Kosterlitz-Thouless Behaviour**

Subray Bhat, Arjun Ashoka, K. N. Anuradha

PS34: Paramagnetism in solution NMR [SOL]

(PS34-1) **Surprises from studying intrinsic paramagnetic susceptibility tensors, new lanthanoid chelating tags and extending pseudocontact shift NMR to the RNA world**

Daniel Häussinger, Raphael Vogel, Daniel Joss, Kevin Erharter, Christoph Kreutz

(PS34-2) **Stable paramagnetic tags for in-cell NMR and EPR analysis**

Xun-Cheng Su, Feng Yang, Jia-Liang Chen, Bin-Li

(PS34-3) **Efficient Fragment Screening using a Paramagnetic Fragment Library**

Marcel Blommers, Kaspar Zimmermann, Anne van der Sluis, Dennis Piet, Peter Maas, Kamal Azzaoui, Daniel Häussinger, Till Rittner, Jan Ferner, Sridhar Sreeramulu, Christian Richter, Anna Wacker, Harald Schwalbe

(PS34-4) **Versatile Non-luminescent Colors based on Guest Exchange Dynamics in Paramagnetic Cavitands**

Elad Goren, Liat Avram, Amnon Bar-Shir

PS35: Nuclear spin [SS]

(PS35-1) **^{59}Co Internal Field NMR as a tool for determining structure and sizes of Co nanoparticles**

Ilya V. Yakovlev, Jean-Baptiste d'Espinose de Lacaillerie, Olga B. Lapina

(PS35-2) **Exploiting Landau-Zener Crossings from Athermal Electrons for Nuclear Hyperpolarization**

Jeffrey A. Reimer, Ashok Ajoy, Carlos Meriles, Alexander Pines

(PS35-3) **NMR at surfaces and interfaces using quantum sensors in diamond**

Dominik B. Bucher, Kristina Liu

(PS35-4) **Nuclear spin coupling crossover in dense molecular hydrogen**

Thomas Meier, Dominique Laniel, Miriam Pena-Alvarez, Florian Trybel, Saiana Khandarkhaeva, Alena Krupp, Jeroen Jacobs, Natalia Dubrovinskaia, Leonid Dubrovinsky

PS36: MAS DNP 2 [HYP]

(PS36-1) **ENHANCING DNP SENSITIVITY WITH SUSTAINABLE CRYOGENIC HELIUM MAS AND IMPROVED POLARIZING AGENTS**

Gaël De Paëpe

(PS36-2) **Technology for NMR >28 Tesla, Pulsed Dynamic Nuclear Polarization, and In-cell Structural Biology**

Alexander B. Barnes

(PS36-3) **^{89}Y-^{89}Y Correlations in Solid State NMR via Direct Hyperpolarization from Paramagnetic Metal Ion Dopants**

Daniel Jardón-Álvarez, Michal Leskes

(PS36-4) **Mixed-valence Polarizing Agents for Efficient Overhauser Effect DNP in Insulating Solids at High Magnetic Fields**

Svetlana Pylaeva, Andrei Gurinov, Marc Baldus, Michael Römelt, Hossam Elgabarty, Thomas Kühne, Benedikt Sieland, Jan Paradies, Andrei Kuzhelev, Thomas Prisner, Konstantin Ivanov

PS37: Proteins involved in drug discovery [SOL]

(PS37-1) **NMR to support targeted protein degradation in drug discovery**

Wolfgang Jahnke, Lili Xie, Josh Paulk, Andreas O. Frank

(PS37-2) **Monitoring Protein Ubiquitination in real-time by NMR**

Ranabir Das, Batul Habibullah, Vasvi Tripathi, Rashmi Agrata, Priyesh Mohanty

(PS37-3) **Using NMR to Probe Ligand Induced Changes in $_{\alpha 1A}$-Adrenoceptor Conformational Equilibria**

Paul R. Gooley, Feng-Jie Wu, Kazem Asadollahi, Saharnaz Rafiee, Tuesday Couzens, Mohammad Tanipour, Daniel J. Scott

(PS37-4) **New Regulatory Aspects of the β_1-adrenergic Receptor Conformational Equilibrium**

Layara Akemi Abiko, Raphael Dias Teixeira, Stephan Grzesiek

PS38: Recoupling & decoupling [SS]

(PS38-1) **Recoupling Schemes in Solid-State NMR in a New Light**

Madhu Kovilakathu Perunthiruthy

(PS38-2) **Different Approaches to Generate ^{1}H-^{1}H Structural Restraints for Pharmaceutical and Biomolecules at Fast MAS**

Vipin Agarwal

(PS38-3) **Heteronuclear and Homonuclear Radio Frequency Driven Recoupling**

Evgeny Nimerovsky, Kai Xue, Kumar Tekwani Movellan, Loren B. Andreas

(PS38-4) **On the Use of Radio-Frequency Offsets for Improving Double-Quantum Homonuclear Dipolar Recoupling of Half-Integer Spin Quadrupolar Nuclei**

Nghia Tuan Duong, Daniel Lee, Frédéric Mentink-Vigier, Olivier Lafon, Gaël De Paëpe

(PS38-5) **Pure isotropic ^{1}H NMR Spectra of Solids**

Lyndon Emsley

PS39: New methods 2 [EPR]

(PS39-1) **Multi-extreme THz ESR: Recent Developments and Applications**

Hitoshi Ohta, Susumu Okubo, Eiji Ohmichi, Takahiro Sakurai, Hideyuki Takahashi, Shigeo Hara

(PS39-2) **Application of EPR Spectroscopy for the investigation of porous materials (MOFs, Zeolites) for eco-friendly chemistry: from NO_x-mitigation to biomass catalysis**

Alena Sheveleva, Xue Han, Jianganan Li, Zi Wang, Lili Li, Xinchen Kang, Longfei Lin, Eric J. L. McInnes, Martin Schöder, Sihai Yang, Floriana Tuna

(PS39-3) **Superconducting surface micro-resonators for general-purpose ESR**

Yaron Artzi, Yakir Yishay, Moamen Jbara, Aharon Blank

(PS39-4) **Enhanced ESR Sensitivity by Resonator Design Optimization**

Stefan Ruloff, Christoph W. Zollitsch, Christopher W.M. Kay

PS40: Complex protein structures [SOL]

(PS40-1) **Structural Insights into How ZFAND1 Recruits p97 for the Clearance of Arsenite-Induced Stress Granules**

Pei-Ju Fan, Tsun-Ai Yu, Kuang-Ting Ko, Chi-Fon Chang, Shang-Te Danny Hsu

(PS40-2) **(NMR) Structural Biology in and at the ribosome and beyond**

Harald Schwalbe, Boris Fürtig

(PS40-3) **Membrane Bound Structure of HR1 Domain of the SARS-CoV-2 Envelope Protein**

Sai Chaitanya Chiliveri, John M. Louis, Rodolfo Ghirlando, Ad Bax

(PS40-4) **Structural Basis for Regulation of a Human G Protein-Coupled Receptor by Endogenous Phospholipids Investigated by NMR Spectroscopy**

Naveen Thakur, Arka Ray, Niloofar Gopal Pour, Beining Jin, Liam Sharp, Edward Lyman, Anuradha Wijesekara, Alexander Duong, Matthew Eddy

PS41: Complex materials 2 [SS]

(PS41-1) **Solid-State NMR Studies of Phosphoserine-Doped Calcium Phosphate Cements with Bone-Adhesive Properties**

Mattias Edén, Renny Mathew, Baltzar Stevensson, Hua Guo, Michael Pujari-Palmer, Håkan Engqvist

(PS41-2) **Quantitative Distance Measurements between ^{1}H and X by Fast MAS Solid-State NMR**

Yusuke Nishiyama

(PS41-3) **Probing Inter - and Intra - Molecular Interactions of Collagen Containing Native Biomaterials such as Bones and Cartilage**

Neeraj Sinha, Nidhi Tiwari

PS42: New methods 3 [EPR]

(PS42-1) **Circularly-polarized light for manipulation of single molecule magnets: fundamental aspects and perspectives granted by the large-scale facilities**

Sergey L.Veber, Alexander G. Maryasov, Thomas Lohmiller, Karsten Holldack, Anatoly R. Melnikov, Alexander Schnegg, Matvey V. Fedin

(PS42-2) **Measurement of Site-Specific Dynamics Permitted by dHis Based EPR Measurements**

Kevin Singewald, Xiaowei Bogetti, Kaustubh Sinha, James Wilkinson, Gordon Rule, Sunil Saxena

(PS42-3) **Molecular Structure of the S_2 State with a $g = 5$ Signal in the Oxygen Evolving Complex of Photosystem II**

Hiroyuki Mino

(PS42-4) **Photogenerated Carrier Dynamics in TIPS-Pentacene Film as Studied by Electrically Detected Magnetic Resonance**

Yoshio Teki, Ken Kato, Hina Kobayashi

PS43: Post-translational modification [SOL]

(PS43-1) **Structural Subtleties of Protein Posttranslational Modifications**

Anne C. Conibear

(PS43-2) **NMR characterization of conformational dynamics of carbohydrate and ubiquitin chains as post-translational protein modifiers**

Koichi Kato, Tatsuya Suzuki, Methanee Hiranyakorn, Saeko Yanaka, Tadashi Satoh, Takumi Yamaguchi, Hirokazu Yagi, Maho Yagi-Utsumi

(PS43-3) **Dynamic Structural Biology Of Gain-Of-Function Cancer-Driving Mutations Of Lysine Methyltransferases In The Nucleosomal Context**

Lukasz Jaremko

(PS43-4) **Global analysis of protein arginine methylation**

Fangrong Zhang, Jakob Kerbl-Knapp, Maria J. Rodriguez Colman, Therese Macher, Nemanja Vujić, Sandra Fasching, Evelyne Jany-Luig, Melanie Korbelius, Katharina Barbara Kuentzel, Maximilian Mack, Alena Akhmetshina, Margret Paar, Beate Rinner, Gerd Hörl, Ernst Steyrer, Ulrich Stelzl, Boudewijn Burgering, Tobias Eisenberg, Brigitte Pertschy, Dagmar Kratky, Tobias Madl

PS44: Spin manipulation [EPR]

(PS44-1) **Spin Manipulation of Stable Organic Radicals Using Arbitrary Waveform Pulses based on Pulse-ESR spectroscopy**

Kazunobu Sato, Rei Hirao, Hajime Sasaki, Kenji Sugisaki, Kazuo Toyota, Daisuke Shiomi, Elena Zaytseva, Victor M. Tormyshev, Elena Bagryanskaya, Takeji Takui

(PS44-2) **Microsecond Exchange Processes Studied by Two-Dimensional ESR at 95 GHz**

Boris Dzikovski, Valery V. Khramtsov, Siddarth Chandrasekaran, Curt Dunnam, Meera Shah, Jack H. Freed

(PS44-3) **Demonstration of NV-detected NMR spectroscopy at 8.3 Tesla**

Benjamin Fortman, Laura Mugica-Sanchez, Noah Tischler, Cooper Selco, Yuxiao Hang, Karoly Holczer, Susumu Takahashi

(PS44-4) **Sidespecific Protonation Assisted Assignment Of Protein Conformation By Double Electron-Electron EPR Spectroscopy**

Thomas Schmidt, Valentine Stadnitskyi, G Marius Clore

PS45: Sensitivity enhancement [MRI]

(PS45-1) **Advances and Promises in Chemical Exchange Saturation Transfer Imaging at Ultra-High Magnetic Fields**

Luisa Ciobanu

(PS45-2) **Glucose Metabolism in Mice Brain Tumor by Dynamical Glucose Enhanced imaging**

Dennis W. Hwang

(PS45-3) **MRI Detection of Hepatic N-Acetylcysteine Uptake in Mice via Thiol-Water Proton Exchange Contrast**

Johnny Chen, Dennis W. Hwang, Yu-Wen Chen, Nirbhay N. Yadav, Timothy Stait-Gardner, William S. Price, Gang Zheng

(PS45-4) **Parahydrogen-induced Hyperpolarization of ^{13}C Fumarate and Application to Necrotic Cell Death Imaging in Hepatitis Mice**

Shingo Matsumoto, Neil J. Stewart, Hitomi Nakano, Takuya Hashimoto, Hiroshi Hirata

PS46: Applications to complex systems [SOL]

(PS46-1) **Solution NMR Approaches to Investigating Protein Behaviours under Intracellular Crowding Environments**

Yutaka Ito, Kohsuke Inomata, Teppei Ikeya

(PS46-2) **Fast Acquisition of 2D NMR Titration Data with Non-Stationary Complementary Non-Uniform Sampling (NOSCO-NUS)**

Javier A. Romero, Ewa K. Nawrocka, Alexandra Shchukina, Francisco J. Blanco, Tammo Diercks, Krzysztof Kazimierczuk

(PS46-3) **NMR-based structural insights into photosystem II assembly**

Raphael Stoll

(PS46-4) **Real-time high-pressure NMR observation of dipicolinic acid leakage: A crucial step for inactivation of bacterial spore**

Akihiro Maeno, Kenji Kanaori, Nguyen. Q.C. Thanh, Kazuyuki Akasaka

PS47: DEER 2 [EPR]

(PS47-1) **Notes From The Frontline Of DEER And RIDME Applications**

Janet E. Lovett

(PS47-2) **Caught in the cell: the wide-open conformation of Msba in *E. coli***

Laura Galazzo, Gianmarco Meier, Dovile Januliene, Arne Möller, Markus A. Seeger, Enrica Bordignon

(PS47-3) **Calcium Transporter Protein YetJ in Nanodiscs by ESR Spectroscopy**

Yun-Wei Chiang, Chieh-Chin Li

(PS47-4) **Structural dynamics of epi-genome related heterochromatin protein HP1 as studied by spin labeling EPR spectroscopy**

Toshiaki Arata, Kazunobu Sato, Risa Mutoh, Yuichi Mishima, Toru Kawakami, Hironobu Hojo, Akira Shinohara, Takeji Takui, Toshimichi Fujiwara, Makoto Miyata, Isao Suetake

PS48: Human body & disease [MRI]

(PS48-1) **In vivo Metabolic Imaging Based on the NMR spectroscopy of Low-γNuclides: Emerging Opportunities and Challenges**

Stefan Markovic, Qingjia Bao, Ricardo Martinho, Michal Neeman, Lilach Agemy, Keren Sasson, Avigdor Scherz, Dana Peters, Lucio Frydman

(PS48-2) **Damaged Lung Gas Exchange Function of Discharged COVID-19 Patients Detected by Hyperpolarized ^{129}Xe MRI**

Xin Zhou

(PS48-3) **Phase-1 Clinical Trial using EPR Oximetry with OxyChip Establishes Feasibility and Potential Utility of Repeated Measurements of Tumor Oxygen**

Periannan Kuppusamy, Benjamin B. Williams, Eunice Y. Chen, Philip E. Schaner

(PS48-4) **Heavy Mice and Lighter Things: Using Solid-State NMR Spectroscopy to Understand Biological Tissues in Health and Disease**

Melinda J Duer

PS49: Nucleic acids [SOL]

(PS49-1) **NMR for RNAs – in-vitro to in-cell**

Judith Schlagnitweit, Emilie Steiner, Hampus Karlsson, Ileana Guzzetti, Lorenzo Baronti, Sarah Friebe Sandoz, Katja Petzold

(PS49-2) **DNA-dynamics-driven mutagenesis: How DNA directs its own copying errors**

Hashim Al-Hashimi

(PS49-3) **Structural insights of RNA mediated gene regulation in plants and higher eukaryotes**

Mandar V. Deshmukh

(PS49-4) **Analysis of Structure and Dynamics of Oligonucleotides in Living Human Cells**

Takashi Nagata, Yudai Yamaoki, Tomoki Sakamoto, Keiko Kondo, Shohei Takami, Masato Katahira

PS50: DEER 3 [EPR]

(PS50-1) **Expanding the scope of EPR distance measurements using hetero-spin labelling**

Daniella Goldfarb, Akiva Feintuch, Chandrima Jash, Angeliki Giannoulis, Thorsten Bahrenberg

(PS50-2) **Functional basis of electron transport within photosynthetic complex I**

Katherine H. Richardson, Guy T. Hanke, Maxie M. Roessler

(PS50-3) **Probing Mixed Duplex/Quadruplex DNA Structures via Cu^{II}-Labeling**

Yury Kutin, Lukas M. Stratmann, Guido H. Clever, Müge Kasanmascheff

(PS50-4) **High Concentration Sensitivity PELDOR**

Graham Smith, Hugo Karas, Yujie Zhao, Daniel Sung, Mike Taylor, Bela Bode, Adelheid Godt, Mian Qi, Janet Lovett, Duncan Robertson, Paul Cruickshank, Hassane El Mkami, Robert Hunter

PS51: Electron/nuclear systems [HYP]

(PS51-1) **Spin Defects in hexagonal Boron Nitride**

Vladimir Dyakonov

(PS51-2) **Neural nets in Magnetic Resonance: how do they actually work?**

Jake L. Amey, Jake Keeley, Tajwar Choudhury, Ilya Kuprov

(PS51-3) **Electron Spin Resonance of Individual Spins on a Surface**

Andreas J. Heinrich

(PS51-4) **Development of a quantum algorithm for the direct calculation of the Heisenberg exchange coupling parameter *J***

Kenji Sugisaki, Kazuo Toyota, Kazunobu Sato, Daisuke Shiomi, Takeji Takui

PS52: Advanced solution NMR methods [SOL]

(PS52-1) **Increasing the Speed and Efficiency of NMR Diffusion Measurements**

William S. Price, Anthony Lee, Allan Torres, Tim Stait-Gardner

(PS52-2) ***In-Situ* NMR Reveals Inorganic Nanocrystal Growth Mechanisms towards their Development as Functional Materials**

Reut Mashiach, Amnon Bar-Shir

(PS52-3) **Pressure as NMR Signal Enhancer in Aqueous Biomolecular Systems**

Kazuyuki Akasaka

PS53: Material science 2 [EPR]

(PS53-1) **Spin-based Quantum Sensing with Electronic Excitations in Organic Semiconductors**

Christoph Boehme

(PS53-2) **Next generation magnetic field effect fluorescence microscopy: toward applications in nanoscience and life science**

Jonathan R. Woodward, Noboru Ikeya, Onkar Gulati, Tito Akindele

(PS53-3) **Combination of MD and EPR on Copper-Based DNA Spin Label Allows Reporting on DNA Backbone Distance Constraints**

Shreya Ghosh, Junmei Wang, Sunil Saxena

PS54: Tissue & tumor [MRI]

(PS54-1) **MR Fingerprinting for Efficient and Reproducible Quantitative Imaging**

Dan Ma

(PS54-2) **Dynamic Nuclear Polarization (DNP) MRI for imaging tissue metabolism Application of dissolution DNP and *in vivo* DNP to animal disease models**

Fuminori Hyodo, Masaharu Murata, Hinako Eto, Norikazu Koyasu, Ryota Iwasaki, Abdelazim Elhelaly, Takashi Mori, Yoshifumi Noda, Hiroki Kato, Masayuki Matsuo

(PS54-3) **3D Shape Quantification of Gadoxetic Acid–enhanced MRI Helps Predict Microvascular Invasion of Small Hepatocellular Carcinoma ≤3 cm**

San-Yuan Dong, Sheng-Xiang Rao

5. Corporate Seminar (CS)

(CS-1) **[Bruker] Update on 1.2 GHz technology and deliveries**

Rainer Kümmerle, Lucia Banci, Christian Griesinger, Loren Andreas

(CS-2) **[JEOL] Making the most of your NMR: Introduction to JASON software**

Manuel Perez

(CS-3) **[Bruker] Dynamic Nuclear Polarization for solids and Liquid State NMR and MRI**

James Kempf

(CS-4) **[Taiyo-Nippon-Sanso] Cell-Free Protein Synthesis for Stable-Isotope-Aided NMR**

Takashi Yabuki

6. Poster Session (Day 1: P1)

Enclosed poster No. ( ) indicates entry to Poster Awards.

1. Solution NMR: New Methods

(P1-1-1) **Evaluation of Marine Degradability by Developing Polymer NMR Detection Web Tool**

Shunji Yamada, Kenji Sakata, Yuuri Tsuboi, Jun Kikuchi

(P1-1-2) **Multi-state structure determination and dynamics analysis reveals a new ubiquitin-recognition mechanism in yeast ubiquitin C-terminal hydrolase**

Teppei Ikeya, Mayu Okada, Yutaka Tateishi, Eri Nojiri, Tsutomu Mikawa, Sundaresan Rajesh, Hiroki Ogasa, Takumi Ueda, Hiromasa Yagi, Toshiyuki Kohno, Takanori Kigawa, Ichio Shimada, Peter Güntert, Yutaka Ito

(P1-1-3) **Sensitivity enhancement of ^{13}C direct-detection experiments of proteins by acquiring both in-phase and antiphase data in a single scan**

Kyoko Furuita, Toshihiko Sugiki, Mika Takamuku, Yoshikazu Hattori, Masatomo So, Yasushi Kawata, Takahisa Ikegami, Toshimichi Fujiwara, Chojiro Kojima

(P1-1-4) **NMR measurements of residual dipolar coupling for a protein using titanium oxide nanosheets and non-detergent sulfobetaines**

Yuma Itasaka, Aoi Kokago, Kyoko Furuita, Toshihiko Sugiki, Kaori Wakamatsu, Noriyuki Uchida, Yasuhiro Ishida, Takuzo Aida, Toshimichi Fujiwara, Chojiro Kojima

(P1-1-5) **Kinetic constraint in the specific interaction between phosphorylated ubiquitin and proteasomal shuttle factors**

Ling-Yun Qin, Gong Zhou, Dong Xu, Tang Chun

(P1-1-6) **Kinetic Analysis of Parkinson's Disease-related Protein α-synuclein in the Process of Amyloid Fibril Formation**

Kota Yoshioka, Yosuke Shimada, Daichi Morimoto, Kenji Sugase

(P1-1-7) **Enhanced, Nanomolar Detection of Hydrogen Peroxide in Rain, Blood, Environmental Air, and Exhaled Breath by NMR Spectroscopy**

Tayeb Kakeshpour, Richard N. Zare, Ad Bax

(P1-1-8) **Substrate-Support Interactions Mediate Hydrogenation of Phenolic Compounds by Pd/CeO_2**

Yeongseo An, Pranjali Naik, Igor I. Slowing, Vincenzo Venditti

(P1-1-9) **^{31}P Singlet Relaxation Rates from NMR and Molecular Dynamics Simulations for a Chemically Equivalent System**

David E Korenchan, Alexej Jerschow

(P1-1-10) **In-measurement T_1 estimation for adaptive optimization of the excitation angles and the recycling delays to improve NMR sensitivity**

Takuma Kasai, Takanori Kigawa

(P1-1-11) **Optimization of instrument-specific measurement parameters affecting on the accuracy of quantitative NMR results**

Taichi Yamazaki, Miho Kuroe, Yoko Ohte, Nobuyasu Itoh

2. Solution NMR: Biological Applications

(P1-1-12) **NMR Investigation Of Structure And Binding Of Vaccinia Virus Protein A26 With Envelope Protein A27 And Extracellular Matrix Laminin**

Kathleen Joyce D. Carillo, Petra Štěrbová, Gian Coronel, Wen Chang, Der-Lii M. Tzou

(P1-1-13) **The Role of DNA Dynamics in Replicative Errors and Mutagenesis**

Or Szekely, Stephanie Gu, Atul Kaushik Rangadurai, Hashim Al-Hashimi

(P1-1-14) **Relaxin(g) your way through inflammatory and heart diseases: insight into a novel binding mechanism of H2 relaxin**

Shatabdi Chakraborty, Thomas B Dschietzig, Ross A D Bathgate, Paul R Gooley

(P1-1-15) **Inhibitory effects of *ortho*-catechol containing isoflavone on tau and $A\beta_{42}$ aggregation**

Ji-Na Yoo, Jong Kil Lee, Nam-Jung Kim, Min-Duk Seo

(P1-1-16) **Insight into the C-terminal SH3 mediated binding of *Drosophila* Drk towards Sos and Dos**

Sayeesh Pooppadi Maxin, Teppei Ikeya, Haruka Sugasawa, Riki Watanabe, Yutaka Ito

(P1-1-17) **Carbonyl ^{13}C-Detect Solution-State Protein NMR Experiments to Circumvent Amide−Solvent Exchange Broadening: Application to β_2-Microglobulin**

Yuichi Yoshimura, Masatomo So, Yohei Miyanoiri

(P1-1-18) **Redefining the role of the LDLa module and LDLa-LRR linker in H2 relaxin binding and activation of its receptors RXFP1 & RXFP2**

Ashish Sethi, Shoni Bruell, Tim Ryan, Fei Yan, Mohammad Hossain Tanipour, Chris Draper-Joyce, Yogesh Khandokar, Riley Metcalf, Michael Griffin, Daniel J Scott, Akhter Hossain, Emma J Petrie, Ross Bathgate, Paul Gooley

(P1-1-19) **Structural studies of α1-Adrenoreceptors using phospholipid bilayer models**

Mohammad Hossein Tanipour, Ashish Sethi, Fengjie Wu, Daniel Scott, Paul R. Gooley

(P1-1-20) **Successful Analysis of the Interaction between a GPCR Peptide Fragment Having High Aggregating Tendency with a Modulator Protein of the GPCR**

Erina Kuzunuki, Ibuki Busujima, Yuka Kurokawa, Taiichi Sakamoto, Toshiyuki Kohno, Kazuo Hosoda, Shin-ichi Terawaki, Kaori Wakamatsu

(P1-2-1) **A Solution NMR Analysis of Photo-degradation of Flupyradifurone: Role of Humic Acid and Its Origin**

Bhawna Chaubey, Pooja Narwal, Samanwita Pal

(P1-2-2) **Structure and RNA Recognition Mechanism of RRM Domain in Cyanobacterial RNA Binding Protein, RbpD from *Anabaena variabilis***

Eugene Hayato Morita, Yuki Tanaka, Hidenori Hayashi, Naoki Sato, Kyoko Furuita, Naohiro Kobayashi, Toshihiko Sugiki, Chojiro Kojima

(P1-2-3) **Strain-dependent Conformational Dynamics of Non-structural Protein 1 of Influenza A Virus**

Iktae Kim, Alyssa Dubrow, Elias Topo, Jae-Hyun Cho

(P1-2-4) **Exploring the Coupled Folding and Binding Mechanism in the Interaction of Neurotensin with the Neurotensin Receptor**

Kazem Asadollahi, Michael Griffin, Daniel Scott, Paul Gooley

(P1-2-5) **Phosphorylation-induced conformation of β_2-adrenoceptor related to arrestin recruitment revealed by NMR**

Yutaro Shiraishi, Mei Natsume, Yutaka Kofuku, Shunsuke Imai, Kunio Nakata, Toshimi Mizukoshi, Takumi Ueda, Hideo Iwaï, Ichio Shimada

(P1-2-6) **Structural Dynamics of the Trigger Factor Chaperone Regulating Proline *cis/trans* Isomerization in Protein Folding**

Soichiro Kawagoe, Hiroshi Nakagawa, Hiroyuki Kumeta, Koichiro Ishimori, Tomohide Saio

(P1-2-7) **Monomeric α-synuclein (αS) inhibits amyloidogenesis of human prion protein (hPrP) by forming a stable αS-hPrP hetero-dimer**

Yuji O. Kamatari, Satoshi Yamashita, Ryo Honda, Kazuo Kuwata

(P1-2-8) **The isolated chicken ASIC1a thumb domain (ATD1a) retains the structure and ligand binding properties of the full length ASIC1a**

Biswa Prasanna Mishra, Elena Laura-Budusan, Ben Cristofori-Armstrong, Xinying Jia, Yanni Chin, Lachlan Rash, Mehdi Mobli

(P1-2-9) **Structural Mechanism of Translational Repression by PABP-interacting protein 2**

Takeru Sagae, Mariko Yokogawa, Ryoichi Sawazaki, Yuichiro Ishii, Nao Hosoda, Shin-ichi Hoshino, Masanori Osawa

(P1-2-10) **Solution NMR study of the antioxidant enzyme GPx4**

Kouki Inomata, Toshihiko Sugiki, Kyoko Furuita, Toshifumi Takao, Naohiro Kobayashi, Toshimichi Fujiwara, Chojiro Kojima

(P1-2-11) **Solution Structure of the Nucleotide hydrolase BlsM: Importance of its Substrate Specificity**

Minhee Kang, Kiran Doddapaneni, Samantha Sarni, Zach Heppner, Vicki Wysocki, Zhengrong Wu

(P1-2-12) **The Presence of Cholesterol Affects the Vpr-membrane Interaction**

Chun Hao Liu, Shing Jong Huang, Tsyr Yan Yu

(P1-2-13) **Catalytic analysis demonstrates that the inhibition of deamination reaction of A3G by Vif complex can be independent of A3G's ubiquitination**

Keisuke Kamba, Li Wan, Satoru Unzai, Ryo Morishita, Takashi Nagata, Masato Katahira

(P1-2-14) **Structural study of heterochromatin protein 1 toward chemical synthesis**

Risa Mutoh, Masatomo So, Toru Kawakami, Toshiki Takei, Hironobu Hojo, Toshimichi Fujiwara, Toshiaki Arata, Isao Suetake

(P1-2-15) **NMR Analysis of an RNA Fragment of *Xist* RNA**

Takuya Hasegawa, Kota Yanagisawa, Takumi Suzuki, Masaki Mishima, Taiichi Sakamoto

(P1-2-16) **NMR Analysis of Interaction between an ssDNA Aptamer Containing Artificial Base Ds and VEGF165**

Tomomi Nagahama, Tatsuhiko Someya, Susumu Muto, Taiichi Sakamoto

(P1-2-17) **NMR characterization of conformational interconversions of Lys48-linked polyubiquitin chains**

Methanee Hiranyakorn, Saeko Yanaka, Tadashi Satoh, Maho Yagi-Utsumi, Koichi Kato

(P1-2-18) **Pseudoknot formation of engineered RNAs derived from Mouse Mammary Tumour Virus controlled by a small molecule compound, NCD**

Denaly Cab, Ayano Yazaki, Kazuhiko Nakatani, Gota Kawai

(P1-2-19) **Electrostatic Interactions between RRM and RNA in CstF-64 Drive a multi-step RNAbinding in the Cleavage and Polyadenylation**

Elahe Masoumzadeh, Anushka Jetly, Petar N. Grozdanov, Clinton C. MacDonald, Michael P. Latham

(P1-2-20) **Characterization of the Conformational Exchanges of Flagellar Rotor Protein FliG, that Induces the Rotational Switching of the Bacterial Flagellar Motor**

Tatsuro Nishikino, Seiji Kojima, Michio Homma, Yohei Miyanoiri

(P1-3-1) **Structural investigation of nervous necrosis virus protrusion domain**

Petra Štěrbová, Chun-Hsiung Wang, Wei-Hao Chang, Der-Lii M. Tzou

(P1-3-2) **NMR spectroscopic analyses of the hydration behavior of α-mannose in solution**

Hiroaki Tatsuoka, Takumi Yamaguchi

(P1-3-3) **Conformational Space Sampled by Domain Reorientation of Linear Diubiquitin Reflected in Its Binding Mode for Target Proteins**

Xue-Ni Hou, Naotaka Sekiyama, Yasuko Ohtani, Feng Yang, Yohei Miyanoiri, Ken-ichi Akagi, Xun-Cheng Su, Hidehito Tochio

(P1-3-4) **The Study of N-loop-containing Protein Tyrosine Phosphatase: Structural Insights into the Active Site Formation of DUSP22**

Chih-Hsuan Lai, Co-Chih Chang, Huai-Chia Chuang, Tse-Hua Tan, Ping-Chiang Lyu

(P1-3-5) **Salt-bridge as a structural switch of Arylalkylamine N-acetyltransferase for the substrate binding and catalysis**

Chu-Ya Wu, I-Chen Hu, Yi-Zong Lee, Shih-Che Sue, Ping-Chiang Lyu

(P1-3-6) **NMR ASSIGNMENTS OF ^{1}H, ^{15}N AND ^{13}C TANDEM SH3-LIKE DOMAIN OF HUMAN KIN17 PROTEIN**

Isabella O. de Lourenço, Flávio A. V. Seixas, Fábio C. L. Almeida, Marcelo A. Fossey, Fátima P. de Souza, Ícaro P. Caruso

(P1-3-7) **Toxic PR poly-dipeptides inhibit the chaperone activity of Kapβ2**

Honoka Kawamukai, Koichiro Ishimori, Tomohide Saio

3. Solution NMR: Metabolomics

(P1-3-8) **^{1}H NMR-based metabolomics approach to investigate the nutrients in root foodstuffs**

Yanli Wang, Xiao Zhang, Xiaowan Huang, Qiang Wang

4. Solid-State NMR: New Methods

(P1-3-9) **Solid State NMR-based 3D Structure Calculation of Proteins**

Mehdi Rahimi, Yeongjoon Lee, Woonghee Lee

(P1-3-10) **Direct Detection of ^{1}H NMR of Biosolids by Ultrafast Magic Angle Spinning**

Eric Chung-Yueh Yuan, Shing-Jong Huang, Ago Samoson, Jerry Chun Chung Chan

(P1-3-11) **Theoretical explanation of new solvent suppression scheme with adiabatic pulse and application for solid-state NMR experiments**

Tatsuya Matsunaga, Ryotaro Okabe, Yoshitaka Ishii

(P1-3-12) **Single-crystal NMR in Polycrystalline Samples by Magnetic Orientation**

Ryosuke Kusumi, Hiroshi Kadoma, Hayate Yasui, Masahisa Wada, Kazuyuki Takeda

5. Solid-Stare NMR: Biological Applications

(P1-3-13) **Side-chain selective deuteration of proteins for solid-state NMR analysis**

Hibiki Terami, Yoshiki Shigemitsu, Yuki Miyazaki, Toshio Yamazaki, Tatsuya Matsunaga, Yoshitaka Ishii

(P1-3-14) **Exploring Oxygen-17 Enriched Fmoc-Amino Acids using Solid-state NMR Spectroscopy and Quantum Chemical Calculations**

Brittney A. Klein, Dylan G. Tkachuk, Victor V. Terskikh, Vladimir K. Michaelis

(P1-3-15) **In situ solid-state NMR investigation of the interaction of erythrocyte membranes with antimicrobial peptides**

Kiran Kumar, Mathew Sebastio, Alexandre A. Arnold, Dror E. Warschawski, Isabelle Marcotte

(P1-3-16) **Architecture elucidation of a glycoprotein-rich microalgal cell wall by ^{13}C solid-state NMR**

Alexandre Poulhazan, Alexandre A. Arnold, Dror E. Warschawski, Tuo Wang, Isabelle Marcotte

(P1-3-17) **Sequential and uni-directional three-residue correlation measurement of protein in MAS solid-state NMR**

Hajime Tamaki, Tomoaki Sugishita, Toshimichi Fujiwara, Yoh Matsuki

(P1-3-18) **NMR Study on Biological Cortical Bone**

Tian He, Pingmei Zeng, Yichuan Pang, An Qin, Ruiliang Bai, Xueqian Kong

(P1-3-19) **Structure of retinal-binding site in sensory rhodopsin II as studied by solid-state NMR**

Mitsuki Irie, Ryota Nishikara, Takashi Okitsu, Akimori Wada, Yuki Sudo, Akira Naito, Izuru Kawamura

(P1-3-20) **Structural Features of $A\beta_{40}$ Oligomers Prepared in Reverse Micelles**

Han-Wen Chang, Ho-I Ma, Shing-Jong Huang, Jerry Chun Chung Chan

6. Solid-State NMR: Materials Science

(P1-4-1) **Probing the Host-guest Interaction in a C_2H_2/CO_2 Discriminative Covalent Organic Framework by Solid State NMR**

Weiming Jiang, Kazuyuki Takeda, Kiyonori Takegoshi, Yasuto Noda

(P1-4-2) **Adsorption on Plastics Evaluated by Signal Deconvolution of Anisotropic NMR Spectra**

Syoya Kitayama, Kiminori Ushida, Jun Kikuchi

(P1-4-3) **Synthesis of carbon coated $LiFeBO_{2.7}F_{0.6}$ and its electrochemical and structural characterizations**

Yujin Son, Youngil Lee

(P1-4-4) **Distribution of Magnesium Ions in Mg-Stabilized Amorphous Calcium Carbonate**

Shu-Li Li, Eric Chung-Yuen Yuan, Shing-Jong Huang, Jerry Chun Chung Chan

(P1-4-5) **Solid-state NMR structural analysis and mechanical property evaluation of recombinant spider silk protein gels with different secondary structures**

Takanori Higashi, Takehiro Sato, Takashi Morinaga, Ryo Satoh, Yu Suzuki

(P1-4-6) **The chiral effect of D-phenylalanine on self-assembly of Phe-Phe dipeptide by solid-state NMR**

Hiroki Yamagishi, Batsaikhan Mijiddorj, Yumi Ozawa, Kazuyoshi Ueda, Hisako Sato, Akira Naito, Izuru Kawamura

(P1-4-7) **Solid state ^{13}C NMR and ESR studies of heat-treated ethylene-methacrylic acid ionomers**

Shohei Mikage, Takayuki Matsukawa, Chikako T. Nakazawa, Atsushi Asano

(P1-4-8) **NMR Study of Single Crystal of Spin-1/2 One-Dimensional Antiferromagnet D-F_5PNN in Critical Magnetic Field Region**

Yutaka Fujii, Tomoki Oida, Yusuke Takahashi, Yuya Ishikawa, Konami Izumi, Naoko Sakai, Kunio Taguma

(P1-4-9) **A new parallel-plate RF probe and battery cartridge for ^{7}Li magnetic resonance studies of lithium-ion battery**

Andrés Ramírez Aguilera, Bryce MacMillan, Sergey Krachkovskiy, Kevin Sanders, Fahad Alkhayri, C. Adam Dyker, Gillian R. Goward, Bruce J. Balcom

(P1-4-10) **Characterizing the Solid Hydrolysis Product, $UF_4(H_2O)_{2.5}$, Generated From Neat Water Reactions With UF_4 at Room Temperature**

Christopher A. Klug, Jonathan H. Christian, Michael DeVore, II, Eliel Villa-Aleman, Bryan J. Foley, Nicholas Groden, A. Taylor Baldwin, Matthew S. Wellons

(P1-4-11) **A Molecular View of the Ligand Packing Pattern on CdSe nanocrystals**

Zhenfeng Pang, Xiaoqi Zhou, Xueqian Kong

7. In-cell/In vivo NMR: Life Science & Medicine

(P1-4-12) **In-cell NMR Analyses of the Structure and Dynamics of Hairpin and G-quadruplex Structures in the Living Human Cells**

Yudai Yamaoki, Takashi Nagata, Keiko Kondo, Tomoki Sakamoto, Shohei Takami, Masato Katahira

(P1-4-13) **In-cell NMR analysis of the DNA triplex structures inside the living human cells**

Tomoki Sakamoto, Yudai Yamaoki, Takashi Nagata, Masato Katahira

(P1-4-14) **Measurement of a Translational Diffusion Coefficient of a Protein in Living Cells Using in-cell NMR**

Hinano Urabe, Taro Imazu, Ryo Ueno, Daichi Morimoto, Masahiro Shirakawa, Kenji Sugase

(P1-4-15) **Observation of Conformational Equilibrium of Intracellular Rac1 by In-cell NMR**

Katsuhiro Donai, Qingci Zhao, Yuki Toyama, Ichio Shimada, Noritaka Nishida

8. DNP/Hyperpolarization

(P1-4-16) **Supercritical Fluid SABRE**

Xiaoqing Li, Xiao Ji, Shannon L. Eriksson, Jacob R. Lindale, Warren S. Warren

(P1-4-17) **Analysis of local polarization using spin-correlated terms of hyperpolarized magnetization in MAS DNP solid-state NMR under an ultralow temperature**

Tomoaki Sugishita, Hajime Tamaki, Ken Kato, Yoh Matsuki, Toshimichi Fujiwara

(P1-4-18) **Development of Nanodiamond-Based Polarizing Agent for DNP MAS NMR with High Reduction Resistance and Protein Regioselectivity**

Ken Kato, Hajime Tamaki, Tomoaki Sugishita, Toshimichi Fujiwara, Yoh Matsuki

(P1-4-19) **triplet-DNP of organic nanocrystals as polarization carrier**

Naoto Matsumoto, Koki Nishimura, Kenichiro Tateishi, Tomohiro Uesaka, Nobuo Kimizuka, Nobuhiro Yanai

(P1-4-20) **Design of an Ultra Low Temperature Cryo-Free High Field Dual EPR/DNP Probe**

Kan Tagami, Raymond Thicklin, Asif Equibal, Sheetal Jain, Miranda Li, Raj Chaklashiya, Songi Han

(P1-5-1) **The distance between g-tensors of nitroxide biradicals governs MAS-DNP performance in the bTurea family**

Frederic Mentink-Vigier, Thierry Dubroca, Johan van Tol, Snorri Th. Sigurdsson

(P1-5-2) **Towards efficient optically-generated Overhauser dynamic nuclear polarization with pulsed laser system**

Koki Nishimura, Kenichiro tateishi, Tomohiro Uesaka, Nobuo Kimizuka, Nobuhiro Yanai

(P1-5-3) **The Factors Influencing Hyperpolarized ^{13}C Pyruvate Bolus Signals: Flip Angle, Spectral Selective Radiofrequency Pulse, and Bolus Curve**

Ching-Yi Hsieh

(P1-5-4) **Speedup of Nuclear-Spin Diffusion in Hyperpolarized Solids**

Yu Wang, Kazuyuki Takeda

(P1-5-5) **Hyperpolarization of ^{13}C in Diamond Using Dynamic Nuclear Polarization with Multi-MW frequencies**

Vladimir Vladimirovich Kavtanyuk, Jeong Hyun Shim, Sangwon Oh, Keunhong Jeong

(P1-5-6) **Design and implementation of electron-nuclear double resonance probe based on split resonator**

Zhen Zhang, Junfei Chen, Zhekai Zhang, Jiwen Feng, Chaoyang Liu

(P1-5-7) **Overhauser Effect DNP at 250 GHz Using a 250 mW Solid-State Source**

Ravi Shankar Palani, Michael Mardini, Natalie Golota, Leo Delage-Laurin, Eric Bryerton, Sucharita Mandal, Sudheer K. Jawla, Snorri Th. Sigurdsson, Timothy Swager, Richard Temkin, Robert G. Griffin

9. ESR: New Methods

(P1-5-8) **High-Resolution Frequency-Domain Electron Paramagnetic Resonance Spectroscopy in the Terahertz Region**

Yuto Shoji, Eiji Ohmichi, Hideyuki Takahashi, Hitoshi Ohta

(P1-5-9) **Purity analysis of 4HTB, TEMPOL and DPPH by “effective magnetic moment method” based on the Curie-Weiss law and the EPR fundamental equation**

Nobuhiro Matsumoto

(P1-5-10) **Toward Time-Resolved Gd-Gd Dipolar EPR (TiGGER) for Filming Protein Dynamics**

Brad Price, Shiny Maity, C. Blake Wilson, Chung-ta Han, Xiaoling Wang, Arnab Mukherjee, Maxwell Wilson, Janet Lovett, Mathieu Starck, David Parker, Songi Han, Mark Sherwin

(P1-5-11) **Application of Thermal Detection Method to High Pressure THz ESR Measurement**

Naoki Nagasawa, Takahiro Sakurai, Hideyuki Takahashi, Eiji Ohmichi, Hitoshi Ohta

(P1-5-12) **Development of an ultra-compact cell for RYDMR**

Harutaka Sano, Hiroki Nagashima, Akihiro Tateno, Lewis M. Antill, Kiminori Maeda

(P1-5-13) **Development of high-sensitivity fluorescence-based microspectroscopy for exploring magnetic field effects in biological systems**

Mizuki Kohmura, Kiminori Maeda, Lewis M Antill

(P1-5-14) **Development of Arbitrary Waveform Modulated Pulse EPR at 115/230 GHz**

Benjamin Fortman, Cooper Selco, Zaili Peng, Susumu Takahashi

10. ESR: Material Science

(P1-5-15) **Study for PEA-Containing Tin Perovskites by Observation of Charge Transfer from PEDOT:PSS to Perovskite Using ESR Spectroscopy**

Atsushi Sato, Mayu Motohashi, Yihuang Wang, Dong Xue, Tomoya Nakamura, Atsushi Wakamiya, Kazuhiro Marumoto

(P1-5-16) **Identification of radical adducts of fullerenes and the addition rate constant measurements by utilizing time resolved and Pulsed-EPR spectroscopy**

Hiroki Hirano, Hirona Takahashi, Akio Kawai

(P1-5-17) **High-pressure ESR Study on Pressure-induced Nonmagnetic-magnetic Transition in Spin Gap System $Cu_2(C_5H_{12}N_2)_2Cl_4$**

Ryosuke Takehara, Takahiro Sakurai, Susumu Okubo, Hitoshi Ohta, Makoto Saga

(P1-5-18) **Reduction of surface spin-induced electron spin relaxations in nanodiamonds**

Ana Gurgenidze, Michael Coumans, Susumu Takahashi

(P1-5-19) **Probing Dielectric Transition and Molecular Dynamics in Metal Organic Framework Using Resonance Spectroscopic Tools**

Jasleen K Bindra, Naresh S. Dalal

(P1-5-20) **ESR/ENDOR Studies of Stable Triphenylmethyl Radical Derivatives with Extended π Conjugation**

Nana Mori, Kenji Sugisaki, Kazuo Toyota, Daisuke Shiomi, Nobuhiro Nagamachi, Tomohiko Nishiuchi, Takashi Kubo, Kazunobu Sato

(P1-6-1) **Time-resolved ESR spectrum of photoinduced electron transfer reaction in ionic liquid**

Tomohito Sato, Tomoaki Yago, Masanobu Wakasa

(P1-6-2) **DMPO Spin Trapping Study in Photolysis of Sulfonylarenes**

Ryoko Oyama, Manabu Abe

(P1-6-3) **Phenomenological Relationship between Crystallite Size of Carbons and EPR *g*-value**

Takatoshi Sawai, Yoji Yamaguchi, Takeshi Nakagawa

(P1-6-4) **Magnetic Excitations of the Spin-1/2 Quasi-One-Dimensional Ising-Like Antiferromagnet $BaCo_2V_2O_8$ in a Transverse Magnetic Field**

Akira Okutani, Hiroaki Onishi, Shojiro Kimura, Tetsuya Takeuchi, Takanori Kida, Michiyasu Mori, Atsushi Miyake, Masashi Tokunaga, Koichi Kindo, Masayuki Hagiwara

(P1-6-5) **Formation of Nitrogen-Vacancy centers in nanodiamonds: Dependence on Size and Type**

Frederick T.-K. So, Alexander I. Shames, Daiki Terada, Takuya Genjo, Hiroki Morishita, Izuru Ohki, Takeshi Ohshima, Shinobu Onoda, Hideaki Takashima, Shigeki Takeuchi, Eiji Ōsawa, Norikazu Mizuochi, Ryuji Igarashi, Masahiro Shirakawa, Takuya F. Segawa

(P1-6-6) **Analyses of Deterioration Mechanism of PTzBT Ternary Polymer Solar Cells Using Electron Spin Resonance Spectroscopy**

Dong Xue, Masahiko Saito, Itaru Osaka, Kazuhiro Marumoto

(P1-6-7) **Microwave Spectroscopy of Chiral Magnet $CrNb_3S_6$ in Magnetic Fields**

Yuya Sawada, Shojiro Kimura, Satoshi Awaji, Jun-ichiro Ohe

(P1-6-8) **Magnetoconductance Caused by Partial Photoexcitation of Organic Solar Cells**

Ryota Abe, Tomoaki Miura, Tadaaki Ikoma

(P1-6-9) **ESR Study of Charge States in Lead-Based Perovskite Solar Cells Using A Novel Hole-Transport Material**

Liang Lihui, Xiangtao Zou, Wenchao Dai, Dong Xue, Tomoya Nakamura, Atsushi Wakamiya, Kazuhiro Marumoto

11. ESR: Biological Applications

(P1-6-10) **X-ray Crystallography and Site-Directed Spin-Labeling ESR Reveal Cold Adaptation and High Thermal Stability Mechanisms of Cold-Adapted Glucokinase**

Akane Yato, Rio Asaka, Hiroshi Sugimoto, Keiichi Watanabe, Masaki Horitani

(P1-6-11) **Continuous-wave (CW) EPR Spectroscopy of Sub-nanoliter Solution Volumes at Room Temperature**

Nandita Abhyankar, Jalal Sadeghi, Gregory Cooksey, Veronika Szalai

(P1-6-12) **Characterization of CRISPR-Cas12a Mediated DNA Unwinding: A Site-Directed Spin Labeling Study**

Jaideep Singh, Peter Z Qin

(P1-6-13) **Antenna-integrated culture dishes for large-area detection of optically detected magnetic resonance of nanodiamond NV centers**

Keisuke Oshimi, Yushi Nishimura, Eiji Shikoh, Yuka Takezawa, Eriko Kage-Nakadai, Masazumi Fujiwara, Yoshio Teki

(P1-6-14) **Effect of Relative Configuration at C2 and C4 position of TEMPO-type Nitroxide on Ascorbate Reduction**

Risa Azuma, Toshihide Yamasaki, Kohei Sano, Masayuki Munekane, Takahiro Mukai

13. In vivo ESR: Life Science & Medicine

(P1-6-15) **The lipid proton ratio exchange of three different types fatty liver induced in an animal model**

Sang-Hyeok Kim, Tae-Seok Kang, Seung-Chan Hur, Seung-Man Yu

(P1-6-16) **Development of dual channel array coil resonator for OMRI**

Ayano Enomoto, Kazuhiro Ichikawa

(P1-6-17) **EPR-based pH measurements using multiple harmonic detections**

Ririko Nakaoka, Hiroshi Hirata

14. MR Imaging: Life Science & Medicine

(P1-6-18) **Mapping Structural and Functional Brain Abnormalities of Attention-Deficit/Hyperactivity Disorder and Borderline Personality Disorder in Adulthood**

Nanfang Pan, Qin Kun, Song Wang, Qiyong Gong

(P1-6-19) **SWIFT with Magnetic-Field Sweep**

Haruka Sawada, Youta Kobayashi, Kazuyuki Takeda

(P1-6-20) **The Role of The Cerebellum in Sleep-related Hypermotor Epilepsy: Alterations in Gray Matter Structure and Covariance Networks**

Xinyue Wan, Weina Wang, Xiaorui Su, Simin Zhang, Qiang Yue, Qiyong Gong

15. Other areas of magnetic resonance and applications

(P1-7-1) **Biodiesel degradation analysis using ^{1}H NMR**

Ana Carolina Gomes Mantovanir, Letícia Thaís Chendynski, Diego Galvan, Dionísio Borsato, Eduardo Di Mauro

(P1-7-2) **Rapid survey of nuclear quadrupole resonance frequency with rapid scan and comb modulated excitation**

Yuta Hibe, Yasuto Noda, K. Takegoshi, Kazuyuki Takeda

(P1-7-3) **Electro-mechano-optical NMR through (2,2)-mode characteristic oscillation of a SiN membrane with separated metasurface mirror and capacitor electrode**

Atsushi Mikami, Yusuke Tominaga, Akiya Iwamura, Koji Usami, Kazuyuki Takeda

(P1-7-4) **Efficient Optical Detection of NMR through a Membrane Transducer**

Yusuke Tominaga, Kazuyuki Takeda

(P1-7-5) **Evaluating the electrolyte degradation mechanism in Li-S batteries using ^{1}H MRI**

Arunkumar Dorai, Junichi Kawamura, Takahisa Omata

(P1-7-6) **Monitoring the formation of free radicals in the degradation of soy biodiesel by EPR**

Ana Carolina Gomes Mantovanir, Letícia Thaís Chendynski, Vinicius Tadeu Santana, Dionísio Borsato, Daniel Farinha Valezi, Eduardo Di Mauro

(P1-7-7) **Transient Absorption Measurement by Cavity Ringdown Method and Observation of Magnetic Field Effect**

Ryohei Yamaga, Kiminori Maeda

(P1-7-8) **Temperature dependence of radical pair dynamics in the binding pocket of bovine serum albumin**

Sota Fukumoto, Nana Iwata, Lewis Antill, Kiminori Maeda

(P1-7-9) **Coherent Control of Radical Pair Dynamics in Low and High Field Regime**

Akihiro Tateno, Kenta Masuzawa, Hiroki Nagashima, Michihiko Sugawara, Kiminori Maeda

(P1-7-10) **Analysis of the three-dimensional structure formed by BSA with a ligand**

Shuhei Arai, Hiroki Nagashima, Lewis M. Antill, Kiminori Maeda

(P1-7-11) **Low field effects on the yield of benzophenone anion radical generated by photoinduced reaction in an ionic liquid**

Ren Sakaguchi, Kiminori Maeda, Tomoaki Yago, Masanobu Wakasa

6. Poster Session (Day 2: P2)

Enclosed poster No. [( )] indicates entry to Poster Awards.

1. Solution NMR: New Methods

[(P2-1-1)] **Solvent Saturation Transfer to Proteins (SSTP) for Structural and Functional Characterization of Proteins**

Pushpa Mishra, Ashley Barnes, Madeleine Strickland, Nico Tjandra

[(P2-1-2)] **Employing TOCSY Pseudo-dimension to Improve The Analysis of Non-labeled Peptides**

Dariusz Gołowicz, Alexandra Shchukina, Krzysztof Kazimierczuk

[(P2-1-3)] **Poison-gap sampling explained**

Paweł Kasprzak, Mateusz Urbańczyk, Krzysztof Kazimierczuk

(P2-1-4) **Local Backbone Assignment By Consistent Set of Fast High-Resolution FOSY Experiments**

Dmitry M. Lesovoy, Panagiota S. Georgoulia, Tammo Diercks, Irena Matečko-Burmann, Björn M. Burmann, Eduard V. Bocharov, Wolfgang Bermel, Vladislav Y. Orekhov

[(P2-1-5)] **Elucidation of the Mechanism by Which Epigallocatechin Gallate Inhibits α-synuclein Amyloid Fibrillation by Using High-Sensitive Rheo-NMR Spectroscopy**

Keita Uchida, Yosuke Shimada, Daichi Morimoto, Kenji Sugase

[(P2-1-6)] **Confirmation of complex molecular structures using new RCSA measurements**

Akhi Das, Nilamoni Nath

[(P2-1-7)] **Establishment for effective volume measurement of coaxial tube for qNMR**

Tatsuki Ogura, Masataka Wakayama, Masayoshi Soga, Masaru Tomita

[(P2-1-8)] **Variable-temperature NMR spectroscopy as a beneficial tool for identifying chemical compounds in metabolities**

Ewa K. Nawrocka, Mateusz Urbańczyk, Krzysztof Kazimierczuk

[(P2-1-9)] **On the Fly NMR approach for profiling curcuminoids present in turmeric**

Aishwarya Praveen, Durga Prasad, Sachin Rama Chaudhari

4. Solid-State NMR: New Methods

[(P2-1-10)] **Frequency-Swept Ultra-Wideline Magic-Angle Spinning NMR Spectroscopy**

Max Bußkamp, Jonas Koppe, Michael Ryan Hansen

1. Solution NMR: New Methods

(P2-1-11) **Design of Novel Pulse Sequences for the Extraction of NMR Spectral Parameters and Addressing the Challenging Problems**

Arun Kumar Patel, David Joseph, Bikash Baishya, N. Suryaprakash

(P2-1-12) **Connection of High-Field and Zero-Field NMR Information in a Single 2D NMR Spectra Accomplished by Field Cycling**

Ivan Zhukov, Alexey Kiryutin, Alexandra Yurkovskaya, John Blanchard, Dmitry Budker, Konstantin Ivanov

(P2-1-13) **^{19}F-DOSY Measurements of Nanofluorides: Insights into the Diffusion Properties of Colloidal Inorganic Nanocrystals**

Reut Mashiach, Liat Avram, Amnon Bar-Shir

(P2-1-14) **Cyclodextrin Inclusion Complexes: Structure and Dynamics through 1D Selective NMR Methods**

Deepak Kumar, Samanwita Pal

(P2-1-15) **Influence of cation structure on diffusion of ammonium ionic liquids: a PGSE NMR study**

Adam Klimaszyk, Roksana Markiewicz, Marcin Jarek, Stefan Jurga

(P2-1-16) **Spectrally resolved, fast-field-cycling, ultralow field nuclear magnetic relaxation dispersion**

Sven Bodenstedt, Morgan W. Mitchell, Michael C. D. Tayler

2. Solution NMR: Biological Applications

(P2-1-17) **Simulation of Nuclear Magnetic Relaxation Induced by Superparamagnetic Nanoparticles trapped in a biological tissue**

Éléonore Martin, Yves Gossuin, Quoc Lam Vuong

(P2-1-18) **Integrative Approaches To Study Various Time-Scale Motions in CssA RNA Thermometer From *Neisseria meningitidis***

Akanksha, Hema K Alajangi, Deepraj Negi, Gurpal Singh, B. Sathyamoorthy, Ravi P Barnwal

(P2-1-19) **^{15}N and ^{31}P NMR-based approach to detect enzymatic catalysis: using bacteria glutamine synthetase as an example**

Pei-Chi Huang, Yuan-Chao Lou, Kuen-Phon Wu

(P2-1-20) **NMR assignment of vaccinia virus protein A28 and the interaction with a fusion suppressor of A26**

Dan-Ni Wu, Der-Lii Tzou

(P2-2-1) **Chemical Shifts and Machine Learning Based Methodology Towards Characterization of DNA G-Quadruplexes**

Bharathwaj Sathyamoothy, Rajesh Kumar Reddy Sannapureddi, Manish Kumar Mohanty, Anoop Kumar Gautam

(P2-2-2) **Describing Transfer RNA Dynamics Using NMR Relaxation**

Emeline Mestdach, Pierre Barraud, Loïc Salmon

(P2-2-3) **BRCA2 conserved and disordered regions in mitosis and meiosis**

Manon Julien, Rania Ghouil, Simona Miron, Chafiaa Bouguechtouli, Ania Alik, Virigine Ropars, Marie-Hélène Le Du, Roland Kanaar, Alex N. Zelenski, Aura Carreira, François-Xavier Theillet, Sophie Zinn-Justin

(P2-2-4) **Does Duplex Impact Quadruplex: Characterization using NMR and MD Simulations**

Rajesh Kumar Reddy Sannapureddi, Manish Kumar Mohanty, Loic Salmon, Bharathwaj Sathyamoorthy

(P2-2-5) **NMR structural analysis of human VAMP-associated protein B**

Wataru Togawa, Kyoko Furuita, Naohiro Kobayashi, Toshimichi Fujiwara, Chojiro Kojima

(P2-2-6) **Towards the high-resolution human serum albumin chaperon functioning and homeostasis**

Samah Al-Harthi, Mariusz Jaremko, Lukasz Jaremko

(P2-2-7) **The Disordered Regions of the SARS-CoV2 Nucleoprotein Studied by Carbon-13 NMR Experiments Within the 1-248 Construct**

Marco Schiavina, Letizia Pontoriero, Vladimir N. Uversky, Isabella Caterina Felli, Roberta Pierattelli

(P2-2-8) **The fuzzy protein-protein interactions deciphered by proton-less high-resolution NMR techniques**

Vladlena Kharchenko, Lukasz Jaremko

(P2-2-9) **Activation pathway of the V2 vasopressin GPCR by combined use of cryoEM and NMR**

Hélène Déméné, Julien Bous, Hélène Orcel, Maxime Louet, Cédric Leyrat, Joséphine Lai-Kee-Him, Nicolas Floquet, Rémy Sounier, Sébastien Granier, Patrick Bron, Bernard Mouillac

(P2-2-10) **Structural Equilibrium Underlying Ligand-Dependent Activation of β2-Adrenoreceptor**

Shunsuke Imai, Tomoki Yokomizo, Yutaka Kofuku, Yutaro Shiraishi, Takumi Ueda, Ichio Shimada

(P2-2-11) **Highly Accurate Analysis of the Interaction Between Proteins and Low Water-solubility Drugs by qNMR-aided NMR Titration Experiments**

Takuya Hirakawa, Daichi Morimoto, Kenji Sugase

(P2-2-12) **Molecular Interaction of 18-β-glycyrrhetinic acid with Human Serum Albumin investigated using NMR in combination with MD simulation experiments**

Ritu Raj, Dinesh Kumar

(P2-2-13) **Cancelled**

(P2-2-14) **Molecular Mechanism of Mad1 Kinetochore Targeting by Phosphorylated Bub1**

Conny W.H. Yu, Elyse Fischer, David Barford, Stefan M.V. Freund

(P2-2-15) **The entropic spring mechanism of the αI-helix in the regulation of Abelson kinase**

Johannes Schlotte, Annalena Maier, Judith Maria Habazettl, Ines Hertel-Hering, Rajesh Sonti, Stephan Grzesiek

(P2-2-16) **Structural and Dynamic Characterization of Epigenetic Modifications in DNA duplex**

Manjula Jaisal, Rajesh Kumar Reddy Sannapureddi, Bharathwaj Sathyamoorthy

(P2-2-17) **NMR spectroscopic analysis of enzymatic cleavage of lignin-carbohydrate linkage in woody biomass by fungal glucuronoyl esterase**

Keiko Kondo, Yuta Sakai, Yuka Yonezawa, Lin Meng-I, Nagata Takashi, Masato Katahira

(P2-2-18) **Integrated Tools for MAX Family Effector Structures**

Mounia Lahfa, Karine DeGuillen, Jérome Gracy, Philippe Barthe, André Padilla

(P2-2-19) **Mapping Molecular Interactions that Drive G-Quadruplex Conformation and Stability**

Deepraj Negi, Rajesh Kumar Reddy Sannapureddi, Bharathwaj Sathyamoorthy

(P2-2-20) **Structural and DNA binding properties of ARID domains present in hSWI/SNF chromatin remodeling complex subunits**

Malyasree Giri, Mahavir Singh

(P2-3-1) **Conserved Methionine-Aromatic Motifs in SUMO Proteins are Critical for Maintaining its Structure-Function Relationship**

Kiran Sankar Chatterjee, Ranabir Das

(P2-3-2) **Structure of *E. coli* HigBA Toxin-Antitoxin Complex Reveals an Ordered DNA-Binding Domain and Intrinsic Dynamics in Antitoxin**

Pankaj Jadhav, Vikrant Kumar Sinha, Ramandeep Singh, Ulli Rothweiler, Mahavir Singh

3. Solution NMR: Metabolomics

(P2-3-3) **The Nature Product Honey: Profiling and Fraud**

Svetlana Simova, Yavor Mitrev, Dessislava Gerginova

(P2-3-4) **A molecular discrimination for the metabolic syndrome using NMR-metabolomics of urine samples**

Chiara Bruzzone, Rubén Gil-Redondo, Marisa Seco, Rocío Barragán, Laura de la Cruz, Tammo Diercks, Maider Bizkarguenaga, Ana Laín, Oscar Coltell, Elisabetta Buguianesi, Nieves Embade, Quentin M. Anstee, Dolores Corella, José M. Mato, Oscar Millet

(P2-3-5) **Identification of Fouling Causing Substances Using NMR Spectra of Membranes and Water in Wastewater Treatment Systems**

Kohei Murayama, Daiki Yokoyama, Jun Kikuchi

(P2-3-6) **Metabolite profiling of non-targeted metabolites in nutraceuticals using ^{1}H-NMR Spectroscopy**

Jayalakshmi Kamaiah

(P2-3-7) **Serum Metabolic Profiles Of Septic Shock Patients Based Upon Co-Morbidities And Other Underlying Conditions**

Swarnima Pandey, Mohd Adnan Siddiqui, Afzal Azim, Neeraj Sinha

(P2-3-8) **Metabolic landscape of the mouse liver by quantitative ^{31}P-NMR analysis of the phosphorome**

Ganeko Bernardo-Seisdedos, Jon Bilbao, David Fernandez-Ramos, Fernando Lopitz-Otsoa, Virginia Gutierrez de Juan, Maider Bizkarguenaga, Borja Mateos, MarcosF. Fondevila, Jordi Abril-Fornaguera, Tammo Diercks, Shelly CLu, Ruben Nogueiras, Jose M Mato, Oscar Millet

(P2-3-9) **^{1}H-NMR Based Lipid Profiling of *Gossypium hirsutum L* Seed Oil at Different Developmental Stages**

Nikita Kurkuri, Sanjay Annarao, Prashanth Miyapadavu, Jayalakshmi Kamaiah

4. Solid-State NMR: New Methods

(P2-3-10) **Development and Application of a High-Sensitivity Cross Polarization Scheme on Ultra-fast Magic Angle Spinning, Decoherence Optimized Tilted-Angle Cross Polarization**

Tatsuya Matsunaga, Kenta Nakata, Isamu Matsuda, Toshio Yamazaki, Yoshitaka Ishii

(P2-3-11) **0.2 MHz H-MAS**

Ago Samoson

(P2-3-12) **MAS Spheres for DNP and In-Cell NMR**

Lauren E. Price, Chukun Gao, Pin-Hui Chen, Thomas Osborn Popp, Nicholas Alaniva, Michael Urban, Ronny Gunzenhauser, Alexander Däpp, Alexander Barnes

(P2-3-13) **Efficient and robust NMR method to probe proximities between nuclei of various spins subject to large anisotropic interactions**

Jean-Paul. Amoureux, Racha Bayzou, Julien Trébosc, Ivan Hung, Zhehong Gan, Olivier Lafon

(P2-3-14) **A Semi-Quantitative Solid-State NMR Study of the Adsorption of Soybean Oils on Silica and Its Significance for Rubber Processing**

Chuanyu Yan, Arpan Datta Sarma, Enzo Morreto, Jean-Sébastien Thomann, Pierre Verge, Daniel Schmidt, François Kayser, Reiner Dieden

(P2-3-15) **Quadrupolar Isotope Correlation Spectroscopy: Resolving Overlapping Wideline NMR Spectra of Quadrupolar Nuclei Under Static Conditions**

Tamar Wolf, Michael J. Jaroszewicz, Lucio Frydman

(P2-3-16) **Indirect Detection of Solid-State NMR Spectra by PROgressive Saturation of the Proton Resonance (PROSPR) *via* ^{1}H Dipolar-Ordered States**

Michael J. Jaroszewicz, Adam R. Altenhof, Robert W. Schurko, Lucio Frydman

(P2-3-17) **ZERO-FIELD NMR OF SOLID SAMPLE**

George Kurian KK, Rajalakshmi G, Madhu PK

(P2-3-18) **Resonances obtained in the ^{1}H fastest MAS spectra are not centered at the isotropic chemical shift**

Bruno Simões de Almeida, Pinelopi Moutzouri, Gabriele Stevanato, Lyndon Emsley

5. Solid-Stare NMR: Biological Applications

(P2-3-19) **Cancelled**

(P2-3-20) **Probing water-mediated mineral arrangements inside the bone-matrix using solid-state NMR spectroscopy**

Navneet Dwivedi, Richa Dubey, Seema Srivastava, Neeraj Sinha

(P2-4-1) **Improving selective DNP (*Sel*DNP) for biomolecular applications**

Ons Dakhlaoui, Thomas Halbritter, Diego Gauto, Annabelle Varrot, Anne Imberty, Snorri Th. Sigurdsson, Sabine Hediger, Gaël De Paëpe

(P2-4-2) **Solid-state NMR study of light-driven inward proton pump schizorhodopsin and the Y71F mutant**

Seiya Tajima, Hideki Kandori, Keiichi Inoue, Izuru Kawamura

6. Solid-State NMR: Materials Science

(P2-4-3) **Internal field NMR for the study of cobalt nanowires and nanoparticles**

Scholzen Pascal, Lang Guillaume, Andrey S. Andreev, d'Espinose de Lacaillerie Jean-Baptiste

(P2-4-4) **Cancelled**

(P2-4-5) **Hydrogel microparticles volume phase transition studied by NMR**

Jacek Jenczyk, Marta Martinez-Moro, Juan Martin Giussi, Stefan Jurga, Sergio E. Moya

(P2-4-6) **Impact of Chain Branching on Coextruded Multilayer PE-PS Films: An NMR and MD Simulation Study**

Bing Wu, Kishan Aryasomayajula, Farhad Shahsavan, Haiyan Mao, Jeffrey A. Reimer, Daniel Hermida Merino, Kay Saalwächter, Andreas Heise

(P2-4-7) **Preferential Nitrogen Occupation Sites in Layered Perovskite-Type Oxynitride Revealed by Ultra-fast MAS Solid-State NMR**

Yasuto Noda, Yusuke Nishiyama, Takayoshi Oshima, Kazuhiko Maeda, Kiyonori Takegoshi

(P2-4-8) **Studying CO_2 speciation and dynamics in amine-modified mesoporous silicas combining CSA and relaxation ^{13}C NMR**

Ildefonso Marín-Montesinos, Ricardo Vieira, João Pereira, Rita Fonseca, Marina Ilkaeva, Mariana Sardo, Luís Mafra

(P2-4-9) **Oxygen-17 Isotopic Enrichment of Calcium Oxalate Monohydrate Phase**

Ieva Goldberga, Jessica Špačková, Chia-Hsin Chen, Christel Gervais, Zhehong Gan, Ivan Hung, Frederic Mentink-Vigier, Julien Trebosc, Philippe Gaveau, Christian Bonhomme, Thomas-Xavier Métro, Danielle Laurencin

(P2-4-10) **Combined Experimental and Computational Study of Butane Isomers Dynamics in UiO-66 (Zr)**

Alexander E. Khudozhitkov, Daniil I. Kolokolov, Alexander G. Stepanov

(P2-4-11) **An Exploration Of The Electrochemically-mediated CO_2 Capture By Quinone Materials Using Solid-state NMR Spectroscopy**

Suzi M. Pugh, Niamh A. Hartley, Javier Carretero Gonzalez, Alexander C. Forse

(P2-4-12) **Solid-state NMR Characterization of Cellulose Nanofibers Isolated from Waste Hop Stem**

Noriko Kanai, Kosuke Nishimura, Izuru Kawamura

(P2-4-13) **Ion Mobilities in Polymer Composites for Electromagnetic Shielding**

Waldemar Keil, Martin Siebrecht, Manoj Kumar Vyas, Robert Graf, Claudia Schmidt

(P2-4-14) **Combination of PFG NMR and Impedance Spectroscopy for Determination of the Rate-Limiting Step in the Dis(charging) of Supercapacitors**

Muslim Dvoyashkin, Lars Borchardt

(P2-4-15) **Local Structure Characteristics and Disorder in Antiferroelectric Ceramics Revealed by ^{23}Na Solid-State NMR Spectroscopy**

Sonja Egert, Mao-Hua Zhang, Niloofar Hadaeghi, Jurij Koruza, Pedro B. Groszewicz, Gerd Buntkowsky

(P2-4-16) **Temperature-Dependent Local Structure Characterization of $Na_{1/2}Bi_{1/2}TiO_3$ – 6 mole% $BaTiO_3$ by Solid State ^{23}Na Nuclear Magnetic Resonance Spectroscopy**

Monica Pinto-Salazar, Lalitha Kodumudi Venkataraman, Pedro B. Groszewicz , Gerd Buntkowsky

(P2-4-17) **NMR Simulation of Zeolites: An Approach Combining *ab initio* Simulations and Machine Learning**

Chen Lei, Andreas Erlebach, Federico Brivio, Petr Nachtigall

7. In-cell/In vivo NMR: Life Science & Medicine

(P2-4-18) **Characterization and Minimization of Biomolecular Perturbations For In-Cell Dynamic Nuclear Polarization Experiments**

Sarah A Overall, Alexander B Barnes

(P2-4-19) **Cancelled**

8. DNP/Hyperpolarization

(P2-4-20) **Room-temperature DNP NMR spectroscopy of small biological molecules in water**

Jiafei Mao, Danhua Dai, Vasyl Denysenkov, Xianwei Wang, Yiwei Liu, Clemens Glaubitz, Xiao He, Thomas Prisner

(P2-5-1) **Cancelled**

(P2-5-2) **Exploring SABRE Polarisation Transfer using *in situ* Earth's field NMR**

Matheus Rossetto, Fraser Hill-Casey, Meghan Halse

(P2-5-3) **High-resolution spectroscopy of bulk solvents using a low-form-factor, ultralow-field NMR instrument**

Fraser Hill-Casey, Sven Bodenstedt, Morgan Mitchell, Michael C.D. Tayler

(P2-5-4) **Developing and Optimizing Methods for DNP MAS NMR Investigations of the Mycobacterial Cell Wall**

Wing Ying Chow, Isabel Ayala, Louis Brigandat, Catherine Bougault, Jean-Pierre Simorre, Gaël de Paëpe, Sabine Hediger

(P2-5-5) **The Effect of Disorder on MAS-DNP from Paramagnetic Metal Ions**

Brijith Thomas, Daniel Jardon-Alvarez, Raanan Carmieli, Hans van Tol, Michal Leskes

(P2-5-6) **Probing ligand coordination driven shape-selective growth of nanoparticles by DNP NMR spectroscopy**

Saumya Badoni, Michał Terlecki, Małgorzata Wolska-Pietkiewicz, Daniel Lee, Janusz Lewiński, Gaël De Paëpe

(P2-5-7) **Multiple DNP Mechanisms In Carbonaceous Materials: From Exogenous To Endogenous DNP Enabling Surface Sensitivity From 100 K To Room Temperature**

Asya Svirinovsky-Arbeli, Raanan Carmieli, Michal Leskes

(P2-5-8) **Advances in Radical Triplet Pair Overhauser DNP**

Daniel J. Cheney, Matthew W. Dale, Christopher J. Wedge

(P2-5-9) **Fast and stable dissolution, transfer and injection system for dissolution Dynamic Nuclear Polarization**

Morgan Ceillier, Olivier Cala, Théo El Daraï, Samuel F. Cousin, Quentin Stern, Sylvie Guibert, Stuart J. Elliott, Basile Vuichoud, Jonas Milani, Christophe Pages, Dmitry Eshchenko, James G. Kempf, Catherine Jose, Simon A. Lambert, Sami Jannin

(P2-5-10) **Heterogeneous ^{1}H and ^{13}C Parahydrogen-Induced Polarization of Acetates and Pyruvates via Side-Arm Hydrogenation**

Oleg G. Salnikov, Nikita V. Chukanov, Larisa M. Kovtunova, Roman V. Shchepin, Eduard Y. Chekmenev, Igor V. Koptyug

(P2-5-11) **An analysis of DNP cross-talk experiments using Provotorov's equations**

Bogdan A. Rodin, Alexandra V. Yurkovskaya, Daniel Abergel

(P2-5-12) **Sample Volume Effects In Optically-Generated Overhauser Dynamic Nuclear Polarization**

Daniel J. Cheney, Christopher J. Wedge

(P2-5-13) **Hyperpolarization and detection of iridium complexes containing ^{1}H and ^{31}P using *in situ* Earth's field NMR spectroscopy**

Aminata Sakho, Meghan E. Halse, Simon B. Duckett

9. ESR: New Methods

(P2-5-14) **Simulation of nitrogen nuclear spin magnetization of liquid solved nitroxides**

Andriy Marko, Antonin Sojka, Oleksii Laguta, Petr Neugebauer

(P2-5-15) **Cryogen-free equipment for EPR**

Eugeny Kryukov, Jeremy Good, Tom Ritman-Meer, Paul Jonsen

(P2-5-16) **High-Frequency Electron Paramagnetic Resonance Technique for Spectroscopic Studies of Metalloproteins under Pressure**

Shota Masuda, Eiji Ohmichi, Takahiro Sakurai, Hideyuki Takahashi, Hitoshi Ohta

(P2-5-17) **^{17}O Hyperfine Spectroscopy for Detection of Water-Binding to Protein Radicals**

Fabian Hecker, Marina Bennati

(P2-5-18) **Chirality-sensitive Electron-nucleus Coupling**

Piotr Garbacz, Juha Vaara

(P2-5-19) **Pulse Dipolar EPR Methods Applied To Triplet Fullerene Spin Label**

Ivan Timofeev, Elena Bagryanskaya, Matvey Fedin , Olesya Krumkacheva

(P2-5-20) **ENDOR at 263 GHz in Conjunction with Statistical Analysis Reveals a Conformational Distribution in a Protein Tyrosyl Radical**

Igor Tkach, Markus Hiller, Henrik Wiechers, Benjamin Eltzner, Stephan F. Huckemann, JoAnne Stubbe, Yvo Pokern, Marina Bennati

(P2-6-1) **High frequency, high sensitivity EPR probe for induction mode spectrometer**

Yujie Zhao, Robert I. Hunter, Hassane EL. Mkami, Graham M. Smith

(P2-6-2) **Loop-Gap Resonator for Electron Paramagnetic Resonance Spectrometer at X-band**

Wei Siang Eow, Yung Szen Yap

10. ESR: Material Science

(P2-6-3) **Zn incorporation in synthetic C-S-H and its effect on cement hydration through DNP enhanced MAS NMR**

Anna Morales-Melgares, Pinelopi Moutzouri, Amrit Venkatesh, Paul Bowen, Karen Scrivener, Lyndon Emsley

(P2-6-4) **Spin-Trapping Analysis for Thermo-Oxidative Degradation of Polypropylene**

Thu Anh Nguyen, Kenji Kinashi, Wataru Sakai, Naoto Tsustumi, Satoko Okubayashi

(P2-6-5) **EPR Characterization of Ti (III) Species in Industrial Working Models of Heterogeneous Ziegler-Natta Catalysts**

Leonora Podvorica, Enrico Salvadori, H. Y. Vincent Ching, Fabrizio Piemontesi, Gianni Vitale, Giampiero Morini, Sabine Van Doorslaer, Mario Chiesa

(P2-6-6) **Degradation Analysis for Polymer Materials by Spin-Trapping**

Wataru Sakai

(P2-6-7) **DETERMINATION OF ELECTRON SPIN RELAXATION AND STRUCTURE OF Ni(II) IN THE DIAMAGNETIC LATTICE AT AMBIENT TEMPERATURE**

Amrutha K, Velavan Kathirvelu

(P2-6-8) **Features of SOCT ISC Process in Donor-bridge-Acceptor Compounds of Anthracene, Perylenebisimide, Naphthalimide and Phenoxazine**

Ivan Kurganskii, Noreen Rehmat, Kepeng Chen, Xiao Liu, Huaiman Cao, Jianzhang, Zhao, Matvey Fedin

(P2-6-9) **Guest leakage from ZIF-8 particles under drug delivery conditions: quantitative characterization and guest-induced framework stabilization**

Artem S. Poryvaev, Anastasiya A. Yazikova, Daniil M. Polyukhov, Olga A. Chinak, Vladimir A. Richter, Olesya A. Krumkacheva, Matvey V. Fedin

(P2-6-10) **TUNING MAGNETIC ANISOTROPY OF GOLD(I) ATOMS IN 2D $\{Co(L)_2[Au(CN)_2]_2\}n$ METAL–ORGANIC FRAMEWORKS WITH FIELD-INDUCED SIM BEHAVIOUR**

M. A. Palacios, I. F. Díaz-Ortega, H. Nojiri, Elizaveta A. Suturina, M. Ozerov, J. Krzystek, E. Colacio

(P2-6-11) **Phase transition behaviors of the magnon BEC in the interacting dimer system TlCuCl3 studied by high field ESR**

Naoto Watanabe, Shojiro Kimura, Satoshi Awaji, Hidekazu Tanaka

(P2-6-12) **A Time-Resolved EPR Study on the Lowest Excited Triplet State of Pt(II) Complexes: Switching of the Emitting States**

Motoko S. Asano, Gai Yasuhara, Ken Kobori, Yuqi Hou, Jianzhang Zhao

(P2-6-13) **Adiabatically excited field-swept cw-ODMR in an ensemble of NV^- centers**

Yusuke Maki, Hideto Matsuoka, Ikuko Akimoto

11. ESR: Biological Applications

(P2-6-14) **The evolution of CPEB4 dynamics across its liquid-liquid phase separation transition**

Manas Seal, Chandrima Jash, Reeba Susan Jacob, Akiva Feintuch, Yair Shalom Harel, Shira Albeck, Tamar Unger, Daniella Goldfarb

(P2-6-15) **4-Amino-TEMPO Loaded Liposomes As EPR Probes For Detection Of Phospholipase A2 Activity**

Diego Alberti, Sabrina Elkhanoufi, Rachele Stefania, Simona Baroni, Silvio Aime, Simonetta Geninatti Crich

(P2-6-16) **Exploring the Interaction of Calmodulin with target peptides by EPR distance measurements**

Chandrima Jash, Shira Naor, Akiva Feintuch, Daniella Goldfarb

(P2-6-17) **High Field 19F-ENDOR for Distance Measurements in the Angstrom to Nanometer Regime in Structural Biology**

Andreas Meyer, Annemarie Kehl, Marina Bennati

(P2-6-18) **Trap and study of the peroxidase intermediate Compound I using the combination of Rapid Freeze Quench – EPR**

Maruan Bracci, Sabine Van Doorslaer, Inés García-Rubio

(P2-6-19) **The Study of Cell Culture Media Influence on ZIF-8 Nanoparticles Stability**

Anna Spitsyna, Anastasiya Yazikova, Artem Poryvaev, Daniil Polyukhov, Igor Kirilyuk, Olga Chinak, Vladimir Richter, Olesya Krumkacheva, Matvey Fedin

(P2-6-20) **Sensing pore formation in the mitochondrial outer membrane via EPR and UV/Vis spectroscopy**

Dominik Gendreizig, Christina Elsner, Svetlana Kucher, Ralf Erdmann, Enrica Bordignon

(P2-7-1) **New, highly sensitive off/on EPR probes to monitor enzymatic activity**

Sabrina Elkhanoufi, Rachele Stefania, Diego Alberti, Simona Baroni, Silvio Aime, Simonetta Geninatti Crich

(P2-7-2) **DEER Sensitivity Challenges to Measure Nanomolar Protein Concentrations in Mammalian Cells**

Svetlana Kucher, Christina Elsner, Stefano Maffini, Enrica Bordignon

(P2-7-3) **Side chain dynamics of spin-labeled γD-crystallin undergoing liquid-liquid phase separation**

Abhishek Kalarikkal, Laura Galazzo, Hasan Cinar, Roland Winter, Enrica Bordignon

14. MR Imaging: Life Science & Medicine

(P2-7-4) **CubosomeWith Encapsulated Metal Nanocrystals as a New Class of MRI Contrast Agents**

Tomasz Zalewski, D.K. Flak, Ł. Przysiecka, K. Fiedorowicz, G. Nowaczyk

15. Other areas of magnetic resonance and applications

(P2-7-5) **Study of heavy metal removal by benchtop NMR**

Bernardi Marie, Vuong Quoc Lam, Gossuin Yves

(P2-7-6) **A portable and lightweight 3D-printed magnet for magnetic resonance applications**

Belal M.K. Alnajjar, André Buchau, Jens Anders

(P2-7-7) **Exploring the relationship between experiment vs computer simulation based on well defined linear homopolymers of poly(methyl methacrylate)**

Wojciech Raj, Krzysztof Hałagan, Sławomir Kadłubowski, Kosma Szutkowski, Jarosław Jung, Joanna Pietrasik

(P2-7-8) **Monitoring Aggregation in Solution State Using NMR Spectroscopy**

Balvinder Singh

(P2-7-9) **Quantitative NMR Assay Method Development and Validation for Remdesivir**

Veera Reddy Pinninti, Saikumar Rayavarapu, Krishnam Raju CH, Arunima Pola, Qun Xu, Yang Liu, Sanath K Goud, Mrunal A Jaywant

(P2-7-10) **The Constant-Hamiltonian Toggling Frame Approach in Comparison with Different GRAPE-based Spin Dynamics Simulation Algorithms for Single- and Two-Spin Systems**

Enikő Baligács, Moritz Oberhauser, Steffen J. Glaser

(P2-7-11) **Development of a high-field HTS magnet**

Chukun Gao, Pin-hui Chen, Alexander Däpp, Ronny Gunzenhauser, Michael A. Urban, Lynn Farner, Snædís Björgvinsdóttir, Nick Alaniva, Alexander B. Barnes

(P2-7-12) **Relaxorption: simultaneous NMR relaxometry and physisorption for in situ adsorption characterization of MOFs**

João Marreiros, Rodrigo de Oliveira-Silva, Paul Iacomi, Philip L. Llewellyn, Rob Ameloot, Dimitrios Sakellariou

(P2-7-13) **Investigating separator membranes used in organic redox flow battery systems using NMR spectroscopy**

Emma J. Latchem, Evan W. Zhao, Rajesh B. Jethwa, Dominic Hey, Thomas Kress, Clare P. Grey, Peter A.A. Klusener, R. Vasant Kumar, Alexander C. Forse

(P2-7-14) **The Influence of Paramagnetic Fe(III) in Geopolymers on 1H NMR Relaxation**

Ziyou Yu, Rodrigo de Oliveira Silva, Yiannis Pontikes, Dimitrios Sakellariou

(P2-7-15) **Advancing The NMR Cryoporometry Toolbox For Porous Solid Characterization**

Henry R. N. B. Enninful, Daniel Schneider, Richard Kohns, Dirk Enke, Rustem Valiullin

(P2-7-16) **In situ EPR investigation on Cu(II) pairs in DUT-49(Cu) to interrogate the Xenon and Ethylene adsorption properties**

Kavipriya Thangavel, Matthias Mendt, Francesco Walenszus, Volodymyr Bon, Stefan Kaskel, Andreas Pöppl

(P2-7-17) **MRI Velocimetry of Non-Newtonian Fluid Flow in a Porous Medium with an Open Channel**

Max James Filkins, Sean Rigby, Thomas Meersmann, Galina Pavlovskaya

(P2-7-18) **In-situ observation of Mn^{2+} dissolution in $LiMn_2O_4$ by ^1H MRI**

Nithya Hellar, Yoshiki Iwai, Arunkumar Dorai, Junichi Kawamura

6. Poster Session (Day 3: P3)

Enclosed poster No. ( ) indicates entry to Poster Awards.

1. Solution NMR: New Methods

(P3-1-1) **Hierarchical Conformational Dynamics Confers Thermal Adaptability to $preQ_1$ RNA Riboswitches**

Shuai Yang, Zhou Gong, Chun Tang

(P3-1-2) **Advanced Isotopic Labelling Achieved by Cell-Free Protein Synthesis**

Takanori Kigawa

(P3-1-3) **CPMG Pulse Sequence that Cancels Artifacts Independently of Spin States for Relaxation Dispersion**

Takahisa Ikegami, Jun-ichi Kurita, Tsuyoshi Konuma

(P3-1-4) **Overexpression of stable isotope-labeled cecropin P1 by using calmodulin-fusion protein system for NMR researches**

Hao Gu, Takasumi Kato, Hiroyuki Kumeta, Hiroaki Ishida, Yasuhiro Kumaki, Takashi Tsukamoto, Takashi Kikukawa, Makoto Demura, Hans J. Vogel, Tomoyasu Aizawa

(P3-1-5) **Nonthermal Excitation Effects Mediated by Sub-terahertz Radiation on Hydrogen Exchange in Ubiquitin as monitored by Solution NMR**

Yuji Tokunaga, Masahito Tanaka, Hitoshi Iida, Moto Kinoshita, Yuya Tojima, Koh Takeuchi, Masahiko Imashimizu

(P3-1-6) **2D NMR-based Metabolomics with HSQC/TOCSY NOAH Supersequences**

Alexandar L. Hansen, Ēriks Kupče, Rafael Brüschweiler

2. Solution NMR: Biological Applications

(P3-1-7) **NMR Structures of Designed b-Sheet Heme Proteins**

Bhattacharjya Surajit

(P3-1-8) **Reconstruction of Residual Structure upon Disulphide Bond Cleavage of β2-Microglobulin Acid-Denatured State**

Ryosuke Tomiyama, Masatomo So, Kazumasa Sakurai

(P3-1-9) **Structural basis for Musashi-1-RNA complex formation**

Wei Hsun Tu, Keisuke Kamba, Takao Imai, Naohiro Kobayashi, Peter Güntert, Takashi Nagata, Masato Katahira

(P3-1-10) **Novel Dark State Phosphate Assembly Formation in Aqueous Solutions**

Mesopotamia Nowotarski, Joshua Straub, Jiaqi Lu, Alexej Jerschow, Song-I Han

(P3-1-11) **Solution NMR analysis of *Rubrobacter xylanophilus* rhodopsin in different membrane-mimetic environments**

Rika Suzuki, Masafumi Hirohata, Chika Hoyano, Minami Fujita, Keiichi Kojima, Yuki Sudo, Hideo Takahashi

(P3-1-12) **Characterization of a Complex between Heme(Fe^{3+}) and a G-Quadruplex DNA**

Yusuke Nakajima, Saburo Neya, Akihiro Suzuki, Atsuya Momotake, Yasuhiko Yamamoto

(P3-1-13) **Flashing Luciferase: its new structure and various level of dynamics**

Tosho Yamazaki, Naohiro Kobayashi, Nan Wu, Tomonori Saotome, Kyoko Takatsu, Satoru Unzai, Yutaka Kuroda

(P3-1-14) **Secondary structure determination of functional long non-coding RNA SINEUP**

Takako Ohyama, Hazuki Takahashi, Harshita Sharma, Toshio Yamazaki, Yoshitaka Ishii, Piero Carninci

(P3-1-15) **Application of Nuclear Magnetic Resonance for Structural Analysis and High-throughput Screening for Inhibitors of FK506-Binding Domain from *Plasmodium knowlesi***

Cahyo Budiman, Yoshikazu Hattori, Kyoko Furuita, Naohiro Kobayashi, Toshimichi Fujiwara, Chojiro Kojima

(P3-1-16) **Residue-specific thermodynamic and kinetic analyses of the topological interconversion of an antimicrobial peptide**

Seiichiro Hayashi, Daisuke Fujinami, Daisuke Kohda

(P3-1-17) **Structural dynamics of antibody: implications for drug discovery**

Junya Okude, Kazuhiro Ohara, Hiroki Kawauchi, Takuya Torizawa

(P3-1-18) **Analyses of the Effects of MPIase on Protein Integration and Membrane Properties**

Shoko Mori, Kaoru Nomura, Toshiyuki Yamaguchi, Kohki Fujikawa, Tsukiho Osawa, Ken-ichi Nishiyama, Keiko Shimamoto

(P3-1-19) **Molecular Mechanism of the Initial Process of Amyloid β Aggregate Formation**

Takashi Kodama, Ken-ichi Akagi, Tomoyo Takai, Ritsuko Yamaguchi, Yoko Monobe, Chojiro Kojima, Toshimichi Fujiwara

(P3-1-20) **Real-time monitoring of a coupled reaction of PGK and GAPDH by NMR spectroscopy**

Hiromasa Yagi, Takuma Kasai, Elisa Rioual, Takanori Kigawa

(P3-2-1) **NMR Studies on Cup s 7, a Novel Allergen from Cypress Pollen**

Jingkang Zheng, Tomona Iizuka, Xiaoshaung Lu, Hiroyuki Kumeta, Yasuhiro Kumaki, Hélène Sénéchal, Pascal Poncet, Tomoyasu Aizawa

(P3-2-2) **Application of NMR metabolomics to the nutritional field**

Yosuke Komatsu, Hiroyuki Kumeta, Yuki Ohnishi, Yasuhiro Kumaki, Tomoyasu Aizawa

(P3-2-3) **Cancelled**

(P3-2-4) **Molecular Recognition of G-Quadruplex DNAs by Tetrapyrrole Macrocyclic Ligands**

China Okamoto, Atsuya Momotake, Yasuhiko Yamamoto

(P3-2-5) **Characterization of Myoglobins Where Exogenous Ligands Replace the Proximal Histidine**

Rie Murata, Tatsuro Sugita, Takashi Matsuo, Shun Hirota, Sachiko Yanagisawa, Saburo Neya, Akihiro Suzuki, Osami Shoji, Yoshihito Watanabe, Atsuya Momotake, Yasuhiko Yamamoto

(P3-2-6) **Deciphering the Binding Interactions between *Acinetobacter baumannii* ACP and β-Ketoacyl ACP Synthase III to Improve Antibiotic Targeting Using NMR Spectroscopy**

Sungjae Choi, Jungwoo Park, Jiwon Yeon, Ahjin Jang, Woo Cheol Lee, Yangmee Kim

(P3-2-7) **Heme Electronic Structure and Local Heme Environment of a Peroxidase-Mimicking Heme-DNAzyme**

Shota Hagiwara, Aya Sugahara, Ryosuke Shinomiya, Saburo Neya, Akihiro Suzuki, Atsuya Momotake, Yasuhiko Yamamoto

(P3-2-8) **Study of the Interaction Between Human Origin Recognition Complex Subunit 1 and G-quadruplex Forming Nucleic Acids**

Afaf Eladl, Yudai Yamaoki, Shoko Hoshina, Haruka Horinouchi, Keiko Kondo, Shou Waga, Takashi Nagata, Masato Katahira

(P3-2-9) **Dynamics-coupled ligand binding in a cryptic site of *Escherichia coli* DsbA inhibits the enzymatic activity *in vitro***

Biswaranjan Mohanty, Wesam S. Alwan, Robert B. Fenwick, Geqing Wang, Gaurav Sharma, Bradley C. Doak, Begoña Heras, Pramodh Vallurupalli, Peter E. Wright, Martin J. Scanlon

(P3-2-10) **Non-canonical regulation of KRAS by SRC and SHP2 through tyrosine phosphorylation**

Teklab Gebregiworgis, Yoshihito Kano, Michael Ohh, Christopher B. Marshall, Mitsuhiko Ikura

(P3-2-11) **Interaction between Heme and Non-Standard Base Inosine(I)-Quartet**

Atsuya Momotake, Aya Sugahara, Karin Torigoe, Yusuke Nakajima, Saburo Neya, Akihiro Suzuki, Yasuhiko Yamamoto

(P3-2-12) **Interaction between Zn(II) Phthalocyanine Derivatives and a G-quadruplex DNA**

Shiori Homma, Mami Uchiyama, Atsuya Momotake, Takahisa Ikeue, Yasuhiko Yamamoto

(P3-2-13) **Protonation state of the protochromic green/red photocycle of the chromatic acclimation sensor RcaE**

Masaki Mishima

3. Solution NMR: Metabolomics

(P3-2-14) **Evaluation of substantial equivalence for the intakes of marine runoff polymers in fishes**

Teppei Fujimura, Kenji Sakata, Jun Kikuchi

(P3-2-15) **Research on taste-related compounds of Eri silkworm by using NMR-based metabolomics**

Li Gan, Zihao Song, Yuki Ohnishi, Hiroyuki Kumeta, Yasuhiro Kumaki, Tomoyasu Aizawa

(P3-2-16) **Study on the Impact of Sample Storage Conditions for NMR-based Human Fecal Metabolomics**

Zihao Song, Li Gan, Kefei Bao, Naoya Kitada, Yuki Ohnishi, Hiroyuki Kumeta, Yasuhiro Kumaki, Takashi Kimura, Koshi Nakamura, Akiko Tamakoshi, Kiminori Nakamura, Tokiyoshi Ayabe, Tomoyasu Aizawa

4. Solid-State NMR: New Methods

(P3-3-1) **Further Development of High-Resolution Quadrupolar HETCOR via Through-Space Population Transfer and ^{1}H Detection under Fast MAS**

Akiko Sasaki, Hideaki Kimura, Julien Trébosc, Jean-Paul Amoureux

(P3-3-2) **Separated quadrupole and shift interactions of ^{2}H NMR spectra in paramagnetic solids**

Takahiro Iijima, Shinobu Ohki, Masataka Tansho

(P3-3-3) **Time-Frequency Simulation of Solid-State NMR for Integrated Analysis of Domain Arrangement and Physical Properties in Polymer Materials**

Koki Hara, Shunji Yamada, Eisuke Chikayama, Jun Kikuchi

(P3-3-4) **CPMG Does Not Give T_2 But Generalized Coherence Time**

Susumu Sasaki, Takuya Sekikawa, Tatsuro Yuge, Yoshiro Hirayama

(P3-3-5) **$T_{1\rho}{}^{H}$ based ROSY: NMR spectral fingerprints for nanoscale phase separation of block copolymers**

Koji Yazawa, Yusuke Nishiyama

(P3-3-6) **Making NMR Instrumentation More Shareable and Reproducible Using 3D Printing**

Rachel W. Martin, Jessica I. Kelz, Jose. L Uribe

5. Solid-Stare NMR: Biological Applications

(P3-3-7) **Proton Detection MAS Solid-State NMR of NpHR Perdeuterated by Proton Back Exchange Approach upon Refolding Method**

Xin Zhang, Hajime Tamaki, Toshimichi Fujiwara

(P3-3-8) **Microwave Heating Processes of Ethanol-hexane and Packing Arrangement of *Samia Cynthia Ricini* Silk Fibroin Revealed by Microwave-irradiation and Solid-state NMR**

Akira Naito, Yugo Tasei, Teruaki Fujito, Izuru Kawamura, Akio Nishimura, Tetsuo Asakura

(P3-3-9) **Solid-state magic angle spinning NMR investigations of microbial rhodopsins**

Izuru Kawamura

6. Solid-State NMR: Materials Science

(P3-3-10) **Structural Change of a Flexible Porous Coordination Polymer upon CO_2 Adsorption**

Takuya Kurihara, Munehiro Inukai, Motohiro Mizuno

(P3-3-11) **A solid-state ^{33}S NMR/NQR study of cross-linking structures in rubbers**

Kazuhiko Yamada

(P3-3-12) **Analysis of Proton Conductive Alginic Acid- Polyacrylic Acid-Triazole Composites by Solid State NMR**

Ryota Watanabe, Takuya Kurihara, Yasuhiro Shigeta, Shogo Amemori, Tomonori Ida, Motohiro Mizuno

(P3-3-13) **Structural Analysis of Metal Organic Frameworks UiO-66 Synthesized in Poly(dimethylsiloxane) Gel Networks**

Shogo Amemori, Sachi Nagame, Saho Maeda, Takuya Kurihara, Yasuhiro Shigeta, Tomonori Ida, Motohiro Mizuno

(P3-3-14) **Solid State NMR Analysis of Proton Conductive Phosphonic Acid Modified Mesoporous Silica-Imidazole Composite**

Ryoka Asano, Yasuhiro Shigeta, Takuya Kurihara, Shogo Amemori, Tomonori Ida, Motohiro Mizuno

(P3-3-15) **Solid-State NMR Study of New Fluoride-Ion Conductors**

Miwa Murakami, Eiki Niwa, Daisuke Mori

(P3-3-16) **Metal-Organic Framework (MOF) Structure, Ligand Dynamics, and Electrochemical Behavior as Supercapacitor Electrodes**

Joel B. Miller, Christopher A. Klug, Catherine Choo, Boris A. Dyatkin, Mark Palenik, Carlos M. Hangarter, Matthew Laskoski

(P3-3-17) **Solid-State NMR Study of Local Structure and Molecular Motion in Vapochromic Metal Complexes**

Motohiro Mizuno, Yasuhiro Shigeta, Takuya Kurihara, Shogo Amemori

7. In-cell/In vivo NMR: Life Science & Medicine

(P3-3-18) **Development of in-cell NMR as a sensitive tool to monitor physiological condition of *Escherichia coli* for recombinant protein production**

Toshihiko Sugiki, Yoshihiro Yamaguchi, Toshimichi Fujiwara, Masayori Inouye, Yutaka Ito, Chojiro Kojima

(P3-3-19) **Analyses of the scalar couplings via bifurcated hydrogen bonds**

Hiroki Nakajima, Taiki Koizumi, Masaki Unno, Yutaka Ito, Masaki Mishima

8. DNP/Hyperpolarization

(P3-4-1) **Reaction monitoring on amide coupling of amino acid derivatives using parahydrogen based hyperpolarization technique**

Keunhong Jeong

(P3-4-2) **The development of DNP system in APM within the decade**

Chaoyang Liu, Zhekai Zhang, Junfei Chen, Qingjia Bao, Jiwen Feng, Maili Liu

(P3-4-3) **Development of bullet-DNP instrumentation for ^{31}P spin**

Yuki Mochizuki, Daisuke Shinmura, Makoto Negoro, Masahiro Kitagawa, Akinori Kagawa

(P3-4-4) **Development of an MAS-DNP Probe for Ultra-Low Temperature DNP-NMR Experiments**

Hiroki Takahashi, Fumio Hobo, Shinji Nakamura, Yuki Endo, Yoh Matsuki, Toshimichi Fujiwara

(P3-4-5) **Time-resolved solid-state NMR study on molecular mechanism for complex formation between Calmodulin and a target protein, Myosin Light Chain Kinase**

Jaekyun Jeon, Wai-Ming Yau, Robert Tycko

(P3-4-6) **Thousands-fold Increase in Paramagnetic Imaging Using DNP-MRI**

Hideo Utsumi, Hiroyuki Utano

(P3-4-7) **Parahydrogen-induced ^{13}C Hyperpolarizer Using A Flow Guide for Magnetic Field Cycling to Evoke ^{1}H-^{13}C Spin Order Transfer toward Metabolic MRI**

Koudai Sawami, Tatsuya Naganuma, Hiroshi Hirata, Shingo Matsumoto

(P3-4-8) **Overhauser DNP Enhanced MRI in Porous Media at 0.06T**

Junfei Chen, Zhen Zhang, Chunsheng Yang, Zhekai Zhang, Jiwen Feng, Chaoyang Liu

9. ESR: New Methods

(P3-4-9) **Development of Pulsed ESR System Using a Gyrotron as a High-power Millimeter-wave Source**

Seitaro Mitsudo, T. Sano, K. Hayashi, A. Okutani, Y. Ishikawa, Y. Fujii

(P3-4-10) **Terahertz Electron Paramagnetic Resonance Spectroscopy Using Compact Frequency-Tunable Photomixing Devices**

Eiji Ohmichi, Yuto Shoji, Hideyuki Takahashi, Hitoshi Ohta

(P3-4-11) **Development of Multi-extreme THz ESR System and Its Application to Cobalt Tutton's Salt**

Takahiro Sakurai, Ryosuke Takehara, Hitoshi Sugawara, Susumu Okubo, Hitoshi Ohta

(P3-4-12) **Development of the field-angle-dependent high-frequency ESR spectroscopy based on thermal detection method**

Hideyuki Takahashi, Takahiro Sakurai, Eiji Ohmichi, Hitoshi Ohta

(P3-4-13) **Pulsed EPR Study on Strong Dynamic Electron Polarization Created in the Quenching of Photo-excited Xanthene Dye's by Nitroxide Radical**

Hirona Takahashi, Ryuya Teraoka, Hiroki Hirano, Akio Kawai

(P3-4-14) **Development of a millimeter-wave band resonator with meanderline for DNP-NMR measurements**

Yuya Ishikawa, Yutaka Fujii, Konami Izumi, Akira Fukuda, Tomoki Oida, Yuta Koizumi, Eiichi Kobayashi, Soonchil Lee, Jarno Järvinen, Sergey Vasiliev, Hikomitsu Kikuchi, Seitaro Mitsudo

(P3-4-15) **Investigating protein-ligand complexes with magnetic field effect-based fluorescence fluctuation spectroscopy**

Lewis M Antill, Mizuki Kohmura, Kiminori Maeda

10. ESR: Material Science

(P3-4-16) **Collective excitations in the spin 1/2 honeycomb-lattice magnet α-$RuCl_3$**

Nobuyuki Kurita, Ryuji Takeda, Hiroyuki Nojiri, Hidekazu Tanaka

(P3-4-17) **ESR Study of One-dimensional Organic Conductors**

Toshikazu Nakamura, Lidong Zhang, Shunsuke Kitou, Hiroshi Sawa

(P3-4-18) **Pulsed High-field ESR Study of Elecrtomagnons in Multiferroic $Sr_2CoSi_2O_7$**

Mitsuru Akaki, Yasuo Narumi, Hitoshi Ohta, Masayuki Hagiwara

(P3-4-19) **Radicals produced in irradiated maltose**

Seiko Nakagawa

(P3-4-20) **Synthesis and ESR Characterization of Cyclen Derivatives Bearing Nitroxyl Radicals**

Taiji Kanda, Toshiaki Arata, Toshimichi Fujiwara

(P3-5-1) **Application of THz ESR on Artificial Spins in Giant Magnetic Molecules**

Hiroyuki Nojiri, Diaz-Ortega Ismael F., Takayuki Ishida

(P3-5-2) **Dynamic Electron Polarization by Quenching of Singlet Oxygen by Trityl Radical**

Hirona Takahashi, Akio Kawai

(P3-5-3) **Low Magnetic Field Effects on Triplet Pair Recombination in Organic Solids**

Tomoaki Yago, Yuta Shinohara, Masanobu Wakasa

(P3-5-4) **Investigation of Various Organic Radicals Dispersed in Polymethylmethacrylate Matrices using the Electron Spin Resonance Spectroscopy Technique**

Hirokazu Kobayashi, Kento Akiniwa, Fumiyasu Iwahori, Hidehiko Honda, Masato Yamamoto, Yuki Odanaka, Masahiro Inagaki

(P3-5-5) **The ESR Selection Rules of the Magnetic Excitation in the S = 1/2 Quasi-One-Dimensional Ising-like Antiferromagnet $BaCo_2V_2O_8$**

Shojiro Kimura, H. Onishi, A, Okutani, M. Akaki, Y. Narumi, M. Hagiwara, K. Okunishi, K. Kindo, Z. He, T. Taniyama, M. Itoh

(P3-5-6) **Excited State Investigation of Phenazine Derivatives for Metal-free Phosphorescent Emitters in Organic Light-Emitting Devices**

Hideto Matsuoka, Hiroki Matsui, Ikuko Akimoto

(P3-5-7) **Angular rotation ESR measurements of S=1/2 two-dimensional antiferromagnet henmilite**

Kanata Hayashi, Tomonori Sano, Yusuke Takahashi, Yuya Ishikawa, Takayuki Asano, Hajime Yamamoto, Hiroyuki Kimura, Terutoshi Sakakura, Yukio Noda, Yutaka Fujii, Seitaro Mitsudo

(P3-5-8) **Approach to radical reaction mechanism for early stage in photopolymerization by using spin-trapping ESR method**

Yusuke Miyake, Kenji Kanaori, Kunihiko Tajima

(P3-5-9) **Geometries and Oscillating Motions Driving Quintet Multiexcitons and Triplet-Triplet Dissociations via the Intramolecular Singlet Fissions**

Masaaki Fuki, Shunta Nakamura, Taku Hasobe, Yasuhiro Kobori

(P3-5-10) **Identifying noise sources via dynamical decoupling of P1 centers in diamond**

Ethan Williams, Chandrasekhar Ramanathan

(P3-5-11) **Possibility of predicting battery performance of $LiMn_2O_4$ using ESR and electrochemical measurements**

Tomohiro Ito, Mika Tada, Kazuhiro Tachibana, Tatsuo Nishina

(P3-5-12) **Exact Analyses of X-band ESR Spectra of High-Spin Cobalt(II) Complexes with Sizable Zero-Field Splitting Tensors**

Takeshi Yamane, Kenji Sugisaki, Kazunobu Sato, Kazuo Toyota, Daisuke Shiomi, Takeji Takui

(P3-5-13) **DEER spectroscopy of electron and hole spins in a semiconductor crystal**

Ikuko Akimoto, Hideto Matsuoka, Takao Sekiya

(P3-5-14) **Multi-frequency Force Detection ESR measurements of Single Microcrystal $KCuMoO_4(OH)$ As S=1/2 Antiferromagnetic Chain with Staggered Field system**

Susumu Okubo, Kazuaki Tsuneishi, Hideyuki Takahashi, Yu Saito, Shigeo Hara, Takahiro Sakurai, Eiji Ohmichi, Kazuyuki Takahashi, Hitoshi Ohta, Kazuhiro Nawa, Takeshi Yajima, Yoshihiko Okamoto, Zenji Hiroi

(P3-5-15) **Cancelled**

(P3-5-16) **Generation domain of quintet multiexcitons via singlet fission in organic thin films as studied by time-resolved EPR**

Takaaki Nagatomo, Saki Matsuda, Yasuhiro Kobori

(P3-5-17) **An Electronic State of Ferrocenium Cation with 1,3-Diazetidine-2,4-diimine as Studied by cw-ESR Spectroscopy and Quantum Chemical Calculation**

Kyosuke Urano, Kodai Tanaka, Keita Horie, Hideto Matsuoka, Kenji Sugisaki, Evgeny Tretyakov, Kazunobu Sato

11. ESR: Biological Applications

(P3-6-1) **Substituent Effect of Benzene Ring at C2 Position of TEMPO-type Nitroxide for Ascorbate Reduction and Redox Potential**

Toshihide Yamasaki, Yuto Matsuda, Kohei Sano, Masayuki Munekane, Takahiro Mukai

(P3-6-2) **Deuteration Provides a Pathway to Exceed 9 nm Range Distance Measurements with Site Directed Cu^{2+} Labeling**

Joshua Casto, Alysia Mandato, Sunil Saxena

(P3-6-3) **Identification of Precursor Anion Radicals for Axial Cleavage of a Photoimmunotherapeutic Agent, IR700, exposed to Near-Infrared (NIR) Light**

Osamu Inanami, Wakako Hiraoka, Yuto Goto, Hideo Takakura, Mikako Ogawa

(P3-6-4) **The Radical Production and Liposome Disruption Induced by Light Irradiation of Water-Soluble Fulleropyrrolidine having an *N*-PEG Pyridinium Unit**

Shoko Okazaki, Shurei Yamamoto, Yuhei Ohta, Keiji Mizuki, Tomohiro Araki, Taizo Hatta, Keizo Takeshita

(P3-6-5) **Redox Reactivity of 2,2-Diphenyl-1-picrylhydrazyl (DPPH) Radical Solubilized by β- Cyclodextrin in Aqueous Buffer Solutions**

Ikuo Nakanishi, Yoshimi Shoji, Kei Ohkubo, Toshihiko Ozawa, Ken-ichiro Matsumoto, Shunichi Fukuzumi

(P3-6-6) **Confirming the Presence of Two Copper Binding Sites on the C-terminus of the Prion Protein using Spin Label Rx**

Tufa Assafa, Elijah Brenman, Jennifer Cordoza, Glenn Millhauser

13. In vivo ESR: Life Science & Medicine

(P3-6-7) **Brain imaging of small animals by compact bench-top EPR imager**

Hirotada G Fujii, Hideo Sato-Akaba, Miho C Emoto

12. ESR: Dosimetry/ Earth Science

(P3-6-8) **Generation of Hydrogen Radical in Water Irradiated by X-ray**

Yusuke Makino, Megumi Ueno, Yoshimi Shoji, Ken-ichiro Matsumoto, Ikuo Nakanishi, Koji Fukui

13. In vivo ESR: Life Science & Medicine

(P3-6-9) **Development of Digital EPR Imaging System for Biological Applications**

Hideo Sato-Akaba, Miho C Emoto, Hirotada G Fujii

14. MR Imaging: Life Science & Medicine

(P3-6-10) **Remote excitation with orthogonal and parallel orientations for MRI at 15.2 T**

J. Lazovic, L. Zopf, S. E. Solis-Najera, F. Vazquez, R. Martin, L. Medina, O. Marrufo, Alfredo O. Rodriguez

(P3-6-11) **Automated machine learning based on MRI radiomics features predicts co-occurrence of IDH mutation and MGMT promoter methylation in gliomas**

Simin Zhang, Xiaorui Su, Huaiqiang Sun

15. Other areas of magnetic resonance and applications

(P3-6-12) **BMRBj: Regional NMR Data Repository Site of PDBj**

Masashi Yokochi, Takeshi Iwata, Yohei Miyanoiri, Chojiro Kojima, Genji Kurisu, Toshimichi Fujiwara

(P3-6-13) **Core Scientific Dataset Model: A lightweight and portable model and file format for multi-dimensional scientific data**

Deepansh Srivastava, Thomas Vosegaard, Dominique Massiot, Philip Grandinetti

(P3-6-14) **Xe-129 NMR Study of Zeolites. How to enhance the Reliability of Adsorption Properties determined by NMR Experiments**

Hideaki Fujiwara, Hirohiko Imai, Yuko Adachi, Atsuomi Kimura

(P3-6-15) **Exact Lindblad Master Equations for Chemical Exchange In the Non-Instantaneous Jump Limit**

Jacob Lindale, Shannon Eriksson, Warren Warren

(P3-6-16) **Anisotropic Radical Pair Reaction stimulated by AWG-based Electron Spin Resonance**

Kiminori Maeda, Kenta Masuzawa, Akihiro Tateno, Hiroki Nagashima, Michihiko Sugawara

7. 60th Annual Meeting of the Nuclear Magnetic Resonance Society of Japan (NMRSJ 2021)

Japanese Oral Session 1

(JS-1) **Micron-scale high-resolution NMR spectroscopy using Nitrogen-Vacancy centers in diamond**
Izuru Ohki, Kohki Morita, Norikazu Mizuochi

(JS-2) **NMR Analysis of Interaction between Artificial Peptides and RNAs Derived from HIV-1 Rev and RRE RNA**
Taiichi Sakamoto, Takashi Nagata, Risa Koji, Tae Maeda, Yumi Takeda, Naohiro Kobayashi, Peter Güntert, Masato Katahira, Colin A. Smith, Kazuo Harada

(JS-3) **Structure of Retinal Chromophore in TAT Rhodopsin as Studied by Solid-state NMR**
Sui Arikawa, Kosuke Katayama, Keisuke Inoue, Hideki Kandori, Izuru Kawamura

(JS-4) **Structure and dynamics of LaIT2, a toxic peptide, from Japanese scorpion, *Liocheles australasiae***
Maiki Tamura, Eugene Hayato Morita, Shinya Ohki

Japanese Oral Session 2

(JS-5) **Anomalous behaviour of spin echoes in liquids with "quantum-pulse" sequences**
Dwi Prananto, Susumu Sasaki

(JS-6) **Influence of the 5'-terminal sequences on the 5'-UTR structure of the HIV-1 genomic RNA**
Camille Michiko Obayashi, Yoko Shinohara, Takao Masuda, Gota Kawai

(JS-7) **Structural Analysis of Amorphous Curcumin Formulations by Solid-State NMR**
Ayako Egawa, Kazuya Nagano, Toshimichi Fujiwara

(JS-8) **NMR studies of the protochromic green/red photocycle of the chromatic acclimation sensor RcaE**
Masaki Mishima

Progress Award Lecture

(PA-1) **Elucidation of the mechanism of dynamic interactions between nucleic acids and proteins using solution NMR**
Ayako Furukawa

(PA-2) **Real-time observation of intracellular biological events using in-cell NMR**
Noritaka Nishida

Honorary Lecture

(HL-1) **Interaction between Tetrapyrrole Macrocycles and Quadruplex Nucleic Acids**
Yasuhiko Yamamoto

8. 60th Annual Meeting of the Society of Electron Spin Science and Technology (SEST 2021)

SEST Award Lecture

(SEST-1) **Magnetic Structure and Spin Dynamics of Excited States in Molecular Materials**
Tadaaki Ikoma

SEST Young Investigator Award Lectures

(SEST-2) **Spin Dynamics of Charge Carriers and Excitons in Organic Semiconductor Materials and Devices**
Yusuke Wakikawa

(SEST-3) **Distance Measurements between Spins and Elucidation of Structures Surrounding Electron Spin by Electron Spin Resonance**
Hiroki Nagashima