

Posters

Day 2 (Nov. 16, Wed.) 13:00~15:00

Day 4 (Nov. 18, Fri.) 12:50~14:50

Solution NMR (development of measuring methods)

- P-001** HNCA-TOCSY-CANH experiments with alternate ^{13}C - ^{12}C labeling: a set of 3D experiment with unique supra-sequential information for mainchain resonance assignment
 ○ Koh Takeuchi¹, Maayan Gal², Hideo Takahashi³, Gerhard Wagner², Ichio Shimada^{1,4} (¹Biomedical Information Research Center, National Institute of Advanced Industrial Science and Technology, Japan, ²Department of Biochemistry and Molecular Pharmacology, Harvard Medical School, ³Graduate School of Nanobioscience, Yokohama City University, ⁴Graduate School of Pharmacology, The University of Tokyo)
- P-002** Capillaries Can Prevent Thermal Convection in an NMR Tube
 ○ Takashi Iwashita, Tsuyoshi Konuma, Kenji Sugase (NMR Group, Division of Organic Chemistry, Suntory Foundation for Life Sciences Bioorganic Research Institute, Japan)
- P-003** Convenient method for modulating the direction of the magnetic susceptibility tensor relative to the target protein and its application for PCS-based protein-protein complex structure determination
 ○ Yoshihiro Kobashigawa¹, Tomohide Saio¹, Masahiro Ushio², Mitsuhiro Sekiguchi³, Masashi Yokochi¹, Kenji Ogura¹, Fuyuhiko Inagaki¹ (¹Department of Structural Biology, Faculty of Advanced Life Science, Hokkaido University, Japan, ²Graduate School of Life Science, Hokkaido University, ³Analysis and Pharmacokinetics Research Labs., Department of Drug Discovery, Astellas Pharma Inc.)
- P-004** Signal assignment approaches for ^{13}C labeled lignocellulose by multidimensional NMR spectroscopy
 ○ Takanori Komatsu¹, Keiko Okushita¹, Jun Kikuchi^{1,2,3,4} (¹Grad. Sch. BionanoSci., Yokohama City Univ., Japan, ²RIKEN Plant Science Center, Japan, ³RIKEN Biomass Eng. Prg., Japan, ⁴Grad. Sch. Bioagri., Nagoya Univ., Japan)
- P-005** Withdraw
- P-006** Tissue-specific biomass profiling of bioenergy plant, *Jatropha curcas*.
 Y ○ Taiji Watanabe¹, Ami Shino², Kinya Akashi³, Jun Kikuchi^{1,2,4,5} (¹Grad. Sch. BionanoSci., Yokohama City Univ., Japan, ²RIKEN Plant Science Center, Japan, ³Grad. Sch. BiolSci., NAIST, Japan, ⁴RIKEN Biomass Eng. Prg., Japan, ⁵Grad. Sch. Bioagri., Nagoya Univ., Japan)
- P-007** A new approach for accurate quantification by using ^{19}F NMR
 Y ○ Taichi Yamazaki, Takeshi Saito, Toshihide Ihara (National Institute of Advanced Industrial Science and Technology, National Metrology Institute of Japan)
- P-008** A novel sensitivity enhancement technique for solution NMR utilizing long longitudinal relaxation time
 ○ Kyoko Furuita¹, Yoshikazu Hattori¹, Takahisa Ikegami¹, Toshimichi Fujiwara¹, Chojiro Kojima^{1,2} (¹Institute for Protein Research, Osaka University, Japan, ²Graduate School of Biological Sciences, Nara Institute of Science and Technology)
- P-009** Structural and dynamic studies of proteins in living cells by in-cell NMR spectroscopy
 ○ Jumpei Hamatsu¹, Takahiro Shirai¹, Daniel Nietlispach², Teppei Ikeya¹, Masaki Mishima¹, Masahiro Shirakawa³, Yutaka Ito¹ (¹Department of Chemistry, Graduate school of Science & Engineering, Tokyo Metropolitan University, Japan, ²Department of Biochemistry, University of Cambridge, UK ³Department of Molecular Engineering, Graduate School of Engineering, Kyoto University, Japan,)
- P-010** Protein Modification Method for Studying Protein-Protein Interaction by NMR
 ○ Yoshikazu Hattori¹, Izuru Ohki², Kyoko Furuita¹, Takahisa Ikegami¹, Harumi Fukada³, Masahiro Shirakawa⁴, Kei-ichi Yokoyama⁵, Ei-ichiro Suzuki^{1,5}, Toshimichi Fujiwara¹, Chojiro Kojima^{1,2} (¹Inst. for Protein Res., Osaka Univ., Japan, ²Grad. Sch. of Biol. Sci., NAIST, Japan, ³Grad. Sch. of Life Env. Sci., Osaka Pref. Univ., Japan, ⁴Grad. Sch. of Eng., Kyoto Univ., Japan, ⁵Inst. for Innovation, Ajinomoto Co. Inc., Japan)
- P-011** Withdraw

Solution NMR (sample preparation)

- P-012** Uniform and Site-specific ^{13}C -labeling in Proteins Using Plant BY-2 Cells with Inducible Virus Vectors
○ Makoto Takeuchi¹, Masashi Mori^{2,3}, Shin-Ya Ohki^{1,3} (¹Japan Advanced Institute of Science and Technology, Japan, ²Ishikawa Prefectural University, Japan, ³JST-SENTAN, Japan)
- P-013** Sampling strategy for plant biomass from hydrosphere
○ Kengo Ito¹, Kenji Sakata¹, Yasuhiro Date^{1,2}, Jun Kikuchi^{1,2,3,4} (¹Grad. Sch. Nanobio., Yokohama City Univ., Japan, ²RIKEN Plant Sci. Cent., Japan, ³Biomass Eng. Prog., RIKEN Res. Clust. Innov., Japan, ⁴Grad. Sch. Bioagri., Nagoya Univ., Japan)
- P-014** Strategy for suppression of aggregation in FROUNT, a regulator of chemokine receptor
Y ○ Tatsuichiro Tsuji¹, Sosuke Yoshinaga¹, Kaori Esaki¹, Yuya Terashima^{2,3}, Etsuko Toda², Kouji Matsushima², Hiroaki Terasawa¹ (¹Grad. Sch. Pharm. Sci., Kumamoto Univ, Japan, ²Grad. Sch. Med., Univ. Tokyo, Japan, ³ECL, Inc., Japan)
- P-015** Development of metabolic isotope-labeling techniques for NMR spectroscopic analyses of high-mannose-type oligosaccharides
○ Yukiko Kamiya¹, Sayoko Yamamoto^{1,2}, Yasunori Chiba³, Yoshifumi Jigami³, Koichi Kato^{1,2} (¹Institute for molecular science and Okazaki Institute for Integrative Bioscience National Institutes of Natural Sciences, Japan, ²Graduate School of Pharmaceutical Sciences, Nagoya City University, Japan, ³Research Center for Medical Glycoscience, National Institute of Advanced Industrial Science and Technology, Japan)

Solution NMR (application to proteins and nucleic acids)

- P-016** NMR structure and dynamics of the C-terminal domain of an R-type lectin from earthworm in complex with lactose
○ Hikaru Hemmi¹, Atsushi Kuno², Sachiko Unno², Jun Hirabayashi² (¹NARO Food Research Institute, National Agricultural and Food Research Organization (NARO), Japan, ²Research Center for Medical Glycoscience, National Institute of Advanced Industrial Science and Technology (AIST), Japan)
- P-017** A telomeric repeat-binding factor TRF2 binds to a parallel G quadruplex structure formed by single telomeric DNA via its Myb domain
○ Yuuka Hirao, Shin Morita, Kazuki Oinishi, Hideaki Shimojo, Shingo Hanaoka, Hideyasu Okamura, Tadateru Nishikawa, Yoshifumi Nishimura (Division of Supramolecular Biology, Graduate School of Nanobioscience, Yokohama City University, Japan)
- P-018** Aromatic Side-Chain Dynamics in FKBP Proteins Characterized by the SAIL Method for Free and Ligand-Bound States
○ Chun-Jiun Yang¹, Mitsuhiro Takeda², JunGoo Jee¹, Akira Mei Ono³, Tsutomu Terauchi³, Masatsune Kainosho^{1,2} (¹Graduate School of Science and Engineering, Tokyo Metropolitan University, Japan, ²Graduate School of Science, Nagoya University, Japan, ³SAIL Technologies, Japan)
- P-019** Structural characterization of carbon monoxide adduct of a complex between heme and a parallel G-quadruplex DNA
○ Hulin Tai¹, Kaori Saito¹, Masashi Fukaya¹, Tomokazu Shibata¹, Saburo Neya², Yasuhiko Yamamoto¹ (¹Department of Chemistry, University of Tsukuba, Japan, ²Graduate School of Pharmaceutical Sciences, Chiba University, Japan)
- P-020** NMR structure of the HP-1 α chromodomain phosphorylated at N-terminal serine residues
Y ○ Ayumi Kawaguchi¹, Hideaki Shimojo¹, Kyoko Hamada², Jun-Ichi Nakayama², Yoshifumi Nishimura¹ (¹Department of Supermolecular Biology, Graduate School of Nanobioscience, Yokohama City University, Japan, ²Laboratory for Chromatin Dynamics, Center for Developmental Biology, RIKEN, Japan)
- P-021** NMR analyses of the protein-membrane interaction by using phosphoinositide-incorporated lipid-protein nanodiscs
○ Mariko Yokogawa¹, Naoki Yoshida², Yoshihiro Kobashigawa¹, Kenji Ogura¹, Kohsuke Harada², Fuyuhiko Inagaki¹ (¹Faculty of Advanced Life Science, Hokkaido University, Japan, ²Graduate School of Life Science, Hokkaido University, Japan)

- P-022** Role of protein fluctuation in determination of amyloid conformation,
 ○ Yumiko Ohhashi, Motomasa Tanaka (Brain Science Institute, RIKEN, Japan)
- P-023** Low-lying excited state of prion protein directly linked to pathogenic conversion
 ○ Yuji O. Kamatari¹, Keiichi Yamaguchi², Kazuo Kuwata² (¹Life Science Center, Gifu University, Japan, ²United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, Japan)
- P-024** Structural studies of tubulin tyrosine ligase 1.
 ○ Kunimichi Saeki¹, Ryoko Maesaki², Yutaka Ito¹, Toshio Hakoshima², Masaki Mishima¹ (¹Graduate school of Science and engineering, Tokyo Metropolitan University, Japan, ²Graduate school of Bioscience NAIST, Japan)
- P-025** Structural analysis for 85 kDa protein complex, general transcription factor TFIIE by NMR spectroscopy
 ○ Masahiko Okuda¹, Yoshihito Moriwaki¹, Masayuki Kataoka¹, Aritaka Nagadoi¹, Aki Tanaka², Yoshiaki Ohkuma², Yoshifumi Nishimura¹ (¹Graduate School of Nanobioscience, Yokohama City University, Japan, ²Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, Japan)
- P-026** Relationship between ¹³C NMR shift of Fe-bound CO and electron density of heme
 ○ Tomokazu Shibata¹, Ryu Nishimura¹, Masashi Fukaya¹, Hulin Tai¹, Takashi Matsuo², Shun Hirota², Akihiro Suzuki³, Izumi Ishigami¹, Takashi Ogura⁴, Saburo Neya⁵, Yasuhiko Yamamoto¹ (¹Department of Chemistry, University of Tsukuba, Japan, ²Graduate School of Materials Science, Nara Institute of Science and Technology, Japan, ³Department of Materials Engineering, Nagaoka National College of Technology, Japan, ⁴Graduate School of Life science, University of Hyogo, Japan, ⁵Graduate School of Pharmaceutical Sciences, Chiba University, Japan)
- P-027** Novel interaction mode of Atg8 with the extreme C-terminal region of Atg7
 ○ Hiroyuki Kumeta¹, Kenji Satoo², Nobuo N Noda^{1,3}, Yuko Fujioka^{1,3}, Kenji Ogura¹, Hitoshi Nakatogawa⁴, Yoshinori Ohsumi⁴, Fuyuhiko Inagaki¹ (¹Department of Structural Biology, Faculty of Advanced Life Science, Hokkaido University, Japan, ²Department of Structural Biology, Graduate School of Life Science, Hokkaido University, Japan, ³Institute of Microbial Chemistry, Tokyo, Japan, ⁴Frontier Research Center, Tokyo Institute of Technology, Japan)
- P-028** Elucidation of the DNA-binding dynamics of the transcription factor Oct3/4 POU homeodomain
Y ○ Tsuyoshi Konuma, Erisa Harada, Kenji Sugase (Bioorganic research institute, SUNTORY foundation for life sciences, Japan)
- P-029** Structure and dynamics of yeast calmodulin
 ○ Kenji Ogura¹, Hideyasu Okamura², Hiroyuki Kumeta¹, Michio Yazawa³, Fuyuhiko Inagaki¹ (¹Faculty of Advanced Life Science, Hokkaido University, Japan, ²Institute of Advanced Energy, Kyoto University, Japan, ³Graduate School of Science, Hokkaido University, Japan)
- P-030** Incorporation of an additional hydrogen bond in the active site of *Hydrogenobacter thermophilus* Cytochrome *c*₅₅₂ by means of protein engineering and its structural and functional consequences
 ○ Akihiro Sugimoto, Shin-ichi Mikami, Naoya Shinohara, Hulin Tai, Yasuhiko Yamamoto (Department of Chemistry, University of Tsukuba, Japan)
- P-031** NMR studies on the histone H2A/H2B hetero dimer and histone chaperones, NAP1 and NAP2
 ○ Yoshihito Moriwaki¹, Mitsuru Okuwaki², Kyosuke Nagata², Masahiko Sato¹, Aritaka Nagadoi¹, Yoshifumi Nishimura¹ (¹Grad. Sch. of Supermol. Biol, Yokohama City Univ., Japan, ²Grad. Sch. of Comprehensive Human Sciences, Univ. of Tsukuba, Japan)
- P-032** NMR analysis of an anti-carbohydrate antibody single-chain Fv fragment toward elucidation of the multivalent recognition mechanism
 ○ Ganesh P. Subedi^{1,2}, Tadashi Satoh¹, Shinya Hanashima¹, Akemi Ikeda¹, Hiroshi Nakada³, Reiko Sato⁴, Mamoru Mizuno⁴, Noriyuki Yuasa⁵, Yoko Fujita-Yamaguchi⁵, Yoshiki Yamaguchi^{1,2} (¹Structural Glycobiology Team, RIKEN ASI, Japan, ²Department of Bioinformatics, Tokyo Medical and Dental University, Japan, ³Faculty of Life Sciences, Kyoto Sangyo University, Japan, ⁴Laboratory of Glyco-organic Chemistry, The Noguchi Institute, Japan, ⁵Department of Applied Biochemistry, Tokai University School of Engineering, Japan)

- P-033** Title NMR analyses of membrane-proximal C-terminal tail of chemokine receptor CCR2 bound to a cytosolic protein FROUNT and membrane
 ○ Kaori Esaki¹, Sosuke Yoshinaga¹, Takashi Saitoh², Toshiyuki Kohno³, Ichio Shimada⁴, Yuya Terashima^{5,6}, Etsuko Toda⁵, Kouji Matsushima⁵, Hiroaki Terasawa¹ (¹Grad. Sch. Pharm. Sci., Kumamoto Univ., Japan, ²Med. Inst. Bioreg. Kyushu Univ., Japan, ³Mitsubishi Kagaku Inst., Life Sciences, Japan, ⁴Grad. Sch. Pharm. Sci., Univ. Tokyo, Japan, ⁵Grad. Sch. Med., Univ. Tokyo, Japan, ⁶ECI, Inc.)
- P-034** Construction and performance of a sample tube with a slot-shaped sample cavity fabricated within magnetic susceptibility-matched glass
 ○ Mitsuhiro Takeda¹, Klaas Hallenga², Masahiro Shigezane³, Markus R. Waelchli⁴, John L. Markley², Masastune Kainosho^{1,5} (¹Graduate School of Science, Nagoya University, Japan, ²Department of Biochemistry, University of Wisconsin-Madison, USA, ³Shigemi Inc., Japan, ⁴Bruker Biospin K.K, Japan, ⁵Center for Priority Areas, Tokyo Metropolitan University, Japan)
- P-035** Elucidation of pyroglutamyl-amyloid beta peptides oligomerization mechanism by solution NMR analyses
Y ○ Shigeto Iwamoto¹, Takashi Saito², Hitomi Yamaguchi¹, Toshiyuki Kohno³, Takaomi C. Saïdo², Hiroaki Terasawa¹ (¹Facul. of Life Sci., Kumamoto Univ., Japan, ²RIKEN BSI, ³Mitsubishi Kagaku Inst., Life Sciences)
- P-036** Structure determination of the protein G B1 domain in living cells by in-cell NMR spectroscopy
 ○ Saori Hosoya¹, Tomomi Hanashima¹, Junpei Hamatsu¹, Teppei Ikeya¹, Masaki Mishima¹, Peter Güntert², Masahiro Shirakawa³, Yutaka Ito¹ (¹Dept. of Chem., Tokyo Metropolitan Univ., Japan, ²Inst. of Biophysical Chemistry and Center for Biomolecular Magnetic Resonance, J. W. Goethe-Univ. Frankfurt, Germany, ³Dept. of Eng., Univ. of Kyoto, Japan)
- P-037** Structure, dynamics and function of high-energy state mutant of ubiquitin
 ○ Souichirou Kitazawa¹, Maho Yagi-Utumi^{2,3}, Akemi Ido⁵, Makoto Urushitani⁵, Kenji Sugase⁴, Koichi Kato^{2,3}, Ryo Kitahara¹ (¹College of Pharmaceutical Science, Ritsumeikan University, Japan, ²Okazaki Institute for Integrative Bioscience and Institute for Molecular Science, National Institutes of Natural Sciences, Japan, ³Graduate School of Pharmaceutical Sciences, Nagoya City University, Japan, ⁴NMR Group, Division of Organic Chemistry, Bioorganic Research Institute, Suntory Foundation for Life Sciences, Japan, ⁵Shiga University of Medical Science, Molecular Neuroscience Research Center, Japan)
- P-038** Base-deamination rate dependent on the direction of sliding of an enzyme along DNA as revealed by numerical analysis of NMR data, and wood biomass studied by solution NMR
 ○ Hiroshi Nishimura¹, Ayako Furukawa¹, Hideyasu Okamura¹, Yu Kozawa¹, Ryo Morishita², Akihide Ryo³, Kenji Sugase⁴, Takashi Watanabe⁵, Masato Katahira¹ (¹Inst. of Advanced Energy, Kyoto Univ., Japan, ²CellFree Sci., Japan, ³Grad. Sch. Med., Yokohama City Univ., Japan, ⁴Bioorg. Res. Inst., Suntory Found. Life Sci., Japan, ⁵RISH, Kyoto Univ., Japan)
- P-039** NMR analyses of mouse peptide ESP4 to elucidate structure and ligand - receptor recognition mechanisms
 ○ Masahiro Taniguchi¹, Sosuke Yoshinaga¹, Sachiko Haga², Kazushige Touhara², Hiroaki Terasawa¹ (¹Graduate School of Pharmaceutical Sciences, Kumamoto University, Japan, ²Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan)
- P-040** NMR studies on the Chp1 chromodomain
 ○ Hideaki Shimojo¹, Mayumi Ishida^{2,3}, Jun-ichi Nakayama^{2,3}, Yoshifumi Nishimura¹ (¹Department of Supramolecular Biology, Graduate School of Nanobioscience, Yokohama City University, Japan, ²Laboratory for Chromatin Dynamics, RIKEN Center for Development Biology, Japan, ³Department of Bioscience, Graduate School of Science and Technology, Kwansai-Gakuin University, Japan)
- P-041** Real-time monitoring of the cytidine deamination along single-stranded DNA by an anti-HIV factor, APOBEC3G
Y ○ Ayako Furukawa¹, Kenji Sugase², Ryo Morishita³, Takashi Nagata¹, Akihide Ryo⁴, Akifumi Takaori⁵, Masato Katahira¹ (¹Inst. of Adv. Energy, Kyoto Univ., Japan, ²Bioorg. Res. Inst., Suntory Found. Life Sci., Japan, ³CellFree Sci., Japan, ⁴Grad. Sch. Med., Yokohama City Univ., Japan, ⁵Grad. Sch. Med., kyoto. Univ., Japan)
- P-042** Structural analysis of a non-coding RNA, CeR-5, found in *C. elegans*
Y ○ Tomonori Yoshida¹, Tatsuya Shimane¹, Takafumi Kawaguchi¹, Seiki Fujiwara², Yuki Sugawara², Chisato Ushida², Gota Kawai¹ (¹Department of Life and Environmental Sciences, Chiba Institute of technology, Japan, ²Department of Biochemistry and Molecular Biology, Hirosaki University, Japan)

- P-043 Structural analyses of receptor recognition mechanism of a mouse pheromone ESP1**
 ○ Makoto Hirakane¹, Sosuke Yoshinaga¹, Toru Sato², Sachiko Haga², Ichio Shimada³, Kazushige Touhara², Hiroaki Terasawa¹ (¹Faculty of Life Sciences, Kumamoto University, Japan, ²Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan, ³Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan)
- P-044 Structural analysis of functional RNA longer than 100 nt by using NMR**
 ○ Takako Ohyama, Gota Kawai (Department of Life and Environmental Sciences, Chiba institute of technology, Japan)
- P-045 Two Natively Folded Conformations of Folate-bound Form of *E.coli* DHFR-D27E Mutant: NMR Signal Assignments and Structural Analysis**
 ○ Tomoko Kunihara¹, Soichiro Kitazawa¹, Naohiro Kobayashi², Eiji Ohmae³, Ryo Kitahara¹ (¹College of Pharmaceutical Sciences, Ritsumeikan University, Japan, ²Protein Research Institute of Osaka University, Japan, ³Department of Mathematical and life Science, Hiroshima University, Japan)
- P-046 Structural and dynamical studies of transcriptional corepressor SHARP/SMRT complex**
 ○ Ayaho Kobayashi¹, Suzuka Mikami², Teppei Kanaba², Yutaka Ito², Masaki Mishima² (¹Department of chemistry, ²Graduate school of science and engineering, Tokyo Metropolitan University, Japan)
- P-047 Autoinhibition and activation of end-binding 1 revealed by NMR**
 ○ Teppei Kanaba¹, Tomoyuki Mori², Ryoko Maesaki², Yutaka Ito¹, Toshio Hakoshima², Masaki Mishima¹ (¹Graduate School of Science and Engineering, Tokyo Metropolitan University, Japan, ²Graduate School of Biological Sciences, Nara Institute of Science and Technology, Japan)
- P-048 Structural study of ternary complex formation of IRF4 using NMR**
 ○ Kouhei Sakaki, Katsutaka Akiyoshi, Yutaka Ito, Masaki Mishima (Department of chemistry, Graduate School of science and engineering, Tokyo Metropolitan University, Japan)
- P-049 An attempt to obtain the structural insight of the multidomain protein PKC by solution NMR**
 ○ Katsutaka Akiyoshi¹, Kensuke Miyazaki¹, Teppei Kanaba¹, Ryoko Maesaki², Yutaka Ito¹, Masaki Mishima¹ (¹Graduate school of science and Engineering, Tokyo Metropolitan University, Japan, ²Graduate School of Bioscience NAIST)
- P-050 NMR analysis of an oligosaccharyltransferase that catalyzes the Asn-linked glycosylation**
 James Nyirenda, Shunsuke Matumoto, ○ Takashi Saitoh, Daisuke Kohda (Medical Institute of Bioregulation, Kyushu University, Japan)
- P-051 NMR study on the basic domain of telomeric protein TRF2 bound to Holliday junction**
 ○ Yoshinao Iwasawa, Hideaki Shimojo, Motoki Murai, Ryo Kanno, Yoshifumi Nishimura (Department of Supramolecular Biology, Graduate school of Nanobioscience, Yokohama City University, Japan)
- P-052 The interaction analysis of CENP-S/X and CENP-T/W by NMR**
 ○ Masahiro Takahashi¹, Aritaka Nagadoi¹, Tatsuya Nishino^{2,3}, Tatsuo Fukagawa^{2,3}, Yoshifumi Nishimura¹ (¹Division of Structural Biology, Graduate School of Nanobioscience, Yokohama City University, Japan, ²National Institute of Genetics, Japan, ³The Graduate University for Advanced Studies, Japan)
- P-053 Heteronuclear multidimensional NMR spectroscopy of proteins in human cultured cells**
 ○ Kaori Onishi¹, Jumpei Hamatsu¹, Dambarudhar Shiba Sankar Hembram¹, Takahiro Haremakei¹, Teppei Ikeya¹, Masaki Mishima¹, Masahiro Shirakawa², Yutaka Ito¹ (¹Department of Chemistry, Tokyo Metropolitan University, Japan, ²Department of Molecular Engineering, Kyoto University, Japan)
- P-054 Structural factors responsible for the regulation of the stability of Fe-Met coordination bond in cytochrome *c***
 ○ Shin-ichi Mikami, Yukie Izumoto, Hulin Tai, Yasuhiko Yamamoto (Department of Chemistry, University of Tsukuba, Japan)
- P-055 Dynamic functional regulation of p38 MAP kinase**
 ○ Yuji Tokunaga^{1,2}, Koh Takeuchi³, Hideo Takahashi^{3,4}, Ichio Shimada^{1,3} (¹Graduate school of Pharmaceutical Sciences, The University of Tokyo, Japan, ²Japan Biological Informatics Consortium (JBIC), Japan, ³Biomedical Information Research Center (BIRC), National Institute of Advanced Industrial Science and Technology (AIST), Japan, ⁴Graduate School of Nanobioscience, Yokohama City University, Japan)

- P-056** pKa measurement of acidic residues of equine β -lactoglobulin using 3D HCCO
 ○ Mitsuaki Nambo¹, Nobuaki Nemoto², Masamichi Ikeguchi¹ (¹Graduate School of Engineering, Soka university, Japan, ²JEOL RESONANCE Inc., Japan)
- P-057** NMR analysis of interaction between an arginine-rich peptide and HIV-1 RRE RNA mutant
 Tae Maeda¹, Maki Sugaya², Shoko Aoyama², Kazuo Harada², ○ Taiichi Sakamoto¹ (¹Department of Life and Environmental Sciences, Faculty of Engineering, Chiba Institute of Technology, Japan, ²Department of Life Sciences, Tokyo Gakugei University, Japan)
- P-058** NMR Analysis on the Interaction between a Yeast Mitochondrial Oxidative Translocator Tim40/Mia40 and a FAD-Linked Sulfhydryl Oxidase Erv1
Y ○ Takahiro Anzai, Shin Kawano, Ikuya Wakamori, Kayoko Terao, Toshiya Endo (Department of Chemistry, Graduate School of Science, Nagoya University, Japan)
- P-059** Conformational fluctuation of Lys48-linked diubiquitin studied by high pressure NMR spectroscopy
 ○ Ryo Kitahara¹, Takashi Hirano², Maho Yagi-Utsumi^{2,3}, Kazumi Hata¹, Kazuyuki Akasaka⁴, Koichi Kato^{2,3} (¹College of Pharmaceutical Sciences, Ritsumeikan University, Japan, ²Graduate School of Pharmaceutical Sciences, Nagoya-City University, Japan, ³Okazaki Institute for Integrative Bioscience and Institute for Molecular Science, National Institutes of Natural Sciences, Japan, ⁴High Pressure Protein Research Center, Kinki University, Japan)
- P-060** An extensively hydrated and folded conformer stabilized at high pressure and low temperature. The case of c-Myb R2 sub-domain.
 ○ Sunilkumar N Puthenpurackal^{1,2}, Akihiro Maeno^{1,2}, Hiroshi Matsuo², Masayuki Oda³, Hisayuki Morii⁴, Kazuyuki Akasaka² (¹Graduate School of Biology-Oriented Science and Technology, Kinki University, Japan, ²High Pressure Protein Research Center, Institute of Advanced Technology, Kinki University, Japan, ³Graduate School of Life and Environmental Sciences, Kyoto Prefectural University, Japan, ⁴National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan.)
- P-061** High pressure NMR study of DHFR from a deep-sea bacterium
 ○ Akihiro Maeno^{1,2}, Sunilkumar N Puthenpurackal^{1,2}, Hiroshi Matsuo², Eiji Ohmae³, Chiaki Kato⁴, Kazuyuki Akasaka² (¹Grad. Sch. of Biol. Sci. and Tech, Kinki Univ., Japan, ²HPPRC, Kinki Univ., Japan, ³Grad. Sch. of Sci., Hiroshima Univ., Japan, ⁴Inst. of Biogeosci., JAMSTEC, Japan)
- P-062** Solution structure of ubiquitin fold domain in SUMO-activating enzyme E1 from rice: Structural differences in the binding region to SUMO-conjugating enzyme E2 play a critical role in E1-E2 specificity
 ○ Rintaro Suzuki, Wataru Tsuchiya, Heisaburo Shindo, Zui Fujimoto, Toshimasa Yamazaki (Biomolecular Research Unit, National Institute of Agrobiological Sciences, Japan)
- P-063** Impact of Charge Mutation on Equilibrium Binding and Encounter Complex Formation between the N-terminal Domain of Enzyme I and the Histidine Phosphocarrier Protein
 ○ Tae-Kyung Yu, Ko On Lee, Jeong-Yong Suh (Biophysics and Nanobiology Laboratory, WCU Biomodulation Major, Department of Agricultural Biotechnology, Seoul National University, Korea)
- P-064** Functional Identification of Toxin-Antitoxin Molecules from *Helicobacter pylori* 26695 and Structural Elucidation of the Molecular Interactions
 Title
 ○ Sun Bok Jang, Kyung-Doo Han, Bong-Jin Lee (Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, South Korea)
- P-065** Withdraw
- P-066** Physicochemical Properties of Pyrazinamidase from *Mycobacterium tuberculosis*
 ○ Su-Jin Cho, Woo-sung Son, Won-Je Kim, Bong-Jin Lee (Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, South Korea)
- P-067** NMR solution structure of HP0827 (O25501_HELPY) from *Helicobacter pylori*: model of the possible RNA-binding site
 ○ Yeon-Jin Yang, Sun-Bok Jang, Bong-Jin Lee (Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, South Korea)

- P-068** Solution structure of hypothetical protein HP1423 (Y1423_HELPY) reveals the presence of aL motif related to RNA binding
○ In-gyun Lee, Ji-Hun Kim, Sung Jean park, Ki-Young Lee, Woo-Sung Son, Na-Young Sohn, Ae-Ran Kwon, Bong-Jin Lee (Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, South Korea)

Solution NMR (organic compounds, natural products, lipids, polysaccharides, chemical biology)

- P-069** Fitting the puzzle together: the cage complexes with an encapsulated cobalt (II) ion as new paramagnetic tags
○ Valentin Novikov, Andrey Lebedev, Yan Voloshin (Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia)
- P-070** Sampling technique for physicochemical analysis of the hydrosphere detritus and benthos
○ Taiga Asakura¹, Seiji Yoshida¹, Yasuhiro Date^{1,2}, Jun Kikuchi^{1,2,3,4} (¹Grad. Sch. Bionano Sci., Yokohama City Univ., Japan, ²RIKEN Plant Science Center, Japan, ³RIKEN Biomass Eng. Prg., Japan, ⁴Grad. Sch. Bioagri., Nagoya Univ., Japan)
- P-071** Thermal isomerization and paramagnetic relaxation of poly (n-propyl propiolate)
○ Takenori Shibayama¹, Shu Arahi¹, Yasuteru Mawatari², Masayoshi Tabata², Toshifumi Hiraoki¹ (¹Hokkaido University, Graduate School of engineering, Japan, ²Muroran Institute of Technology, Japan)
- P-072** ¹³C-NMR analysis for the quantitative observation of rapid proton exchange on LewisX hydroxyl groups in water
○ Shinya Hanashima¹, Koichi Kato^{2,3}, Yoshiki Yamaguchi¹ (¹Structural Glycobiology Team, RIKEN ASI, Japan, ²Department of Structural Biology and Biomolecular Engineering, Nagoya City University, Japan, ³Okazaki Institute for Integrative Bioscience and Institute for Molecular Science, National Institutes of Natural Sciences, Japan)
- P-073** Selective COSY-J-resolved-HMBC, A New Method for Improving Sensitivity of Cross Peaks of Methine Proton Signals Attached to A Methyl Group in J-resolved HMBC or Selective J-resolved HMBC
○ Kazuo Furihata (Division of Agriculture and Agricultural Life Sciences, University of Tokyo, Japan)
- P-074** Conformation analysis of poly (lactic acid) model compounds and the origin of the NMR chemical shift distribution due to the stereoregularity
Y
○ Koto Suganuma^{1,2}, Ken Horiuchi², Hironori Matsuda², Akihiro Aoki¹, H.N. Cheng³, Tetsuo Asakura¹ (¹Department of Biotechnology, Tokyo University of Agriculture and Technology, Japan, ²Material Analysis Research Laboratories, Teijin Ltd, Japan, ³Agricultural Research Service, United States Department of Agriculture, USA)
- P-075** Application of paramagnetic NMR to analyses of conformations and dynamics of oligosaccharides
Y
○ Sayoko Yamamoto^{1,2}, Takumi Yamaguchi^{2,3}, Ying Zhang^{2,3}, Máté Erdélyi⁴, Christian Griesinger⁵, Koichi Kato^{1,2,3} (¹Graduate School of Pharmaceutical Sciences, Nagoya City University, Japan, ²National Institutes of Natural Sciences, Japan, ³SOKENDAI, Japan, ⁴Department of Chemistry, University of Gothenburg, Sweden, ⁵Department for NMR-Based Structural Biology, Max Planck Institute for Biophysical Chemistry, Germany)
- P-076** Degradation of liquid organic semiconductors analyzed by NMR
Y
○ Junichi Yamamoto¹, Masashi Fukuchi¹, Tatsuya Fukushima¹, Shuzo Hirata², Heo Hyo Jung², Osamu Hirata^{2,3}, Yuki Shibano³, Chihaya Adachi², Hironori Kaji¹ (¹Institute for Chemical Research, Kyoto University, Japan, ²OPERA, Kyusyu University, Japan, ³Nissan Chemical Industries, LTD, Japan)
- P-077** Stereochemical analysis of functionalized bispidinones by NMR techniques
○ Paramasivam Parthiban, Dong Ho Park (Department of Biomedical Chemistry, Inje University, Korea)

Solution NMR (inorganic chemistry, analytical chemistry)

- P-078** High-Pressure Multinuclear NMR Analyses of Lewis Acid-Lewis Base Interactions between Boron Compounds and Uranyl β -Diketonato Complexes in Supercritical CO₂
○Naomi Miyamoto, Takehiko Tsukahara, Yoshihiro Kachi, Masayuki Harada, Yasuhisa Ikeda (Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology, Japan)

Solid NMR (development of measuring methods)

- P-079** Determination of dynamic structure and orientation of alamethicin bound to the acidic lipid bilayers by solid-state NMR spectroscopy
○Jun Wang¹, Atsushi Tsutsumi¹, Kiyonobu Yokota², Izuru Kawamura¹, Akira Naito¹ (¹Graduate School of Engineering, Yokohama National University, Japan, ²Computational Biology Research Center, National Institute of Advanced Industrial Science and Technology, Japan)
- P-080** DNP with photoexcited triplet electrons in thin film
Y ○Kenichiro Tateishi, Makoto Negoro, Akinori Kagawa, Masahiro Kitagawa (Graduate School of Engineering Science, Osaka University, Japan)
- P-081** Microwave heating of liquid crystals under *in-situ* microwave irradiation solid-state NMR
○Yugo Tasei¹, Teruyuki Fujito², Izuru Kawamura¹, Akira Naito¹ (¹Graduate School of Engineering, Yokohama National University, Japan, ²Prove Laboratory Inc., Japan)
- P-082** Improvement of X₀ shim coil
○Tatsuya Matsunaga^{1,3}, Takashi Mizuno², Kiyonori Takegoshi¹ (¹Division of Chemistry, Graduate School of Science, Kyoto University, Japan, ²JEOL Resonance Inc., Japan ³Global COE., Japan)
- P-083** Sensitivity enhancement of ³³S-MASNMR using cryocoil MAS probe
○Shinji Matsuo¹, Takashi Mizuno², Yasuto Noda¹, K. Takegoshi¹ (¹Graduate School of Science, Kyoto University, Japan, ²JEOL RESONANCE Inc., Japan)

Solid NMR (application to the life sciences)

- P-084** Evaluation of cellulose degradation properties in microbial ecosystem by solution and solid-state NMR
Y ○Keiko Okushita¹, Tomohiro Iikura¹, Yushiro Date², Yoshiyuki Ogata², Eisuke Chikayama^{1,2}, Jun Kikuchi^{1,2,3,4} (¹Grad. Sch. Nanobio, Yokohama City Univ., Japan, ²RIKEN Plant Sci. Cent., Japan, ³Biomass Eng. Prog., RIKEN Clust. Inov., ⁴Grad. Sch. Bioagri. Nagoya Univ., Japan)
- P-085** Simulation of Magic-Angle Spinning Solid-State NMR Spectral Fitting for Proteins and Peptides using Replica-Exchange Monte Carlo Algorithm
○Keisuke Ikeda¹, Tomoshi Kameda², Ayako Egawa¹, Hideo Akutsu¹, Toshimichi Fujiwara¹ (¹Institute for Protein Research, Osaka University, Japan, ²Computational Biology Research Center, AIST, Japan)
- P-086** NMR-based conformational analysis of sphingomyelin in lipid rafts
○Toshiyuki Yamaguchi, Yoshiko Maeta, Nobuaki Matsumori, Michio Murata (Department of Chemistry, Osaka University, Japan)
- P-087** Solid-state NMR analysis of the molecular interaction of Pradimicin A with Ca²⁺ion and mannose
○Takashi Doi¹, Yuichi Masuda¹, Keita Yamada¹, Yu Nakagawa², Yukishige Ito^{2,3}, Yasuhiro Igarashi⁴, K. Takegoshi¹ (¹Graduate School of Science, Kyoto University, Japan, ²Synthetic Cellular Chemistry Laboratory, RIKEN Advanced Science Institute, Japan, ³Japan Science and Technology Agency, ERATO, Ito Glycotriology Project, Japan, ⁴Biotechnology Research Center, Toyama Prefectural University, Japan)
- P-088** Solid-state NMR structural analysis of transmembrane halobacterial transducer ρ HtrII
○Ayako Egawa¹, Keisuke Ikeda¹, Momoko Yoneyama¹, Kokoro Hayashi², Chojiro Kojima¹, Hideo Akutsu¹, Toshimichi Fujiwara¹ (¹Institute for Protein Research, Osaka University, Japan, ²Graduate School of Biological Sciences, Nara Institute for Science and Technology, Japan)

- P-089** Intermolecular Structure Analysis in Alanine Oligomers by ^{13}C , ^{15}N , and ^{17}O Gauge-Including Projector Augmented-Wave (GIPAW) Calculations
Y ○ Furitsu Suzuki¹, Akihiro Aoki², Tetsuo Asakura², Yusuke Nishiyama³, Hironori Kaji¹ (¹Institute for Chemical Research, Kyoto Univ., Japan, ²Department of Biotechnology, Tokyo Univ. of Agriculture and Technology, Japan, ³JEOL RESONANCE Inc., Japan)
- P-090** Three Dimensional Solid-state NMR study of 7TM-Halorhodopsin
Y ○ Hajime Tamaki¹, Marika Higuchi¹, Ayako Egawa², Masakatsu Kamiya¹, Takashi Kikukawa¹, Tomoyasu Aizawa¹, Keiichi Kawano¹, Toshimichi Fujiwara², Makoto Demura¹ (¹Graduate School of Life Science, Hokkaido University, Japan, ²Institute for Protein Research, Osaka University, Japan)
- P-091** A solid-state NMR study of structural alteration and function of the PH domain induced at the lipid bilayer surface.
 ○ Naomi Tokuda¹, Katsuhisa Kawai¹, Young-Ho Lee², Takahisa Ikegami², Hitoshi Yagisawa¹, Yasuhisa Fukui³, Satoru Tuzi¹ (¹Grad. Schl. Life Sci., Univ. Hyogo, Japan, ²Inst. for Prot. Res., Osaka Univ., Japan, ³Natl. Hlth. Res. Inst., Taiwan)
- P-092** Photo-induced dynamics change of Phoborhodopsin with transducer as studied by ^{13}C solid-state NMR
 ○ Izuru Kawamura¹, Ryutaro Furusato¹, Tetsuro Hidaka¹, Takashi Okitsu², Akimori Wada², Naoki Kamo³, Akira Naito¹ (¹Graduate School of Engineering, Yokohama National University, Japan, ²Department of Organic Chemistry for Life Science, Kobe Pharmaceutical University, Japan, ³College of Pharmaceutical Sciences, Matsuyama University, Japan)
- P-093** Integrated analysis of low-solubility biomass by a combination of NMR and other methods
 ○ Hiroshi Hayashi¹, Amiu Shino², Jun Kikuchi^{1,2,3,4} (¹Grad. Sch. of Nanobio, Yokohama City Univ., Japan, ²RIKEN Plant Sci. Cent., Japan, ³Biomass Eng. Prog., RIKEN, Japan, ⁴Grad. Sch. of Bioagri., Nagoya Univ., Japan)
- P-094** Hydrogen-bonding network and rotational motion of Ser side-chain studied by solid-state NMR
 ○ Tsunenori Kameda¹, Hidetoshi Teramoto¹, Daisuke Hashizume², Hiroyuki Koshino², Katsuyuki Nishimura³ (¹National Institute of Agrobiological Sciences, Japan, ²RIKEN Advanced Science Institute, Japan, ³National Institutes of Natural Sciences, Japan)
- P-095** Analysis of local dynamics of hydration water in lysozyme crystal using ^1H - ^2H two-dimensional heteronuclear correlation MAS-NMR
 ○ Hiroaki Takahata, Ryutaro Ohashi, Motohiro Mizuno (Department of Chemistry, Graduate School of Natural Science and Technology, Kanazawa University, Japan)
- P-096** Dynamical analysis of hydrated water in hen egg white lysozyme crystal using solid-state deuterium NMR
 ○ Ryutaro Ohashi, Hiroaki Takahata, Ryo Kaneko, Takashi Araya, Takao Kazikawa, Motohiro Mizuno (Department of Material Chemistry, Natural Science & Technology, Kanazawa University, Japan)

Solid NMR (application to polymer science)

- P-097** Strain Induced ^{13}C Chemical Shift Change of Natural Rubber After MAS
Y ○ Masashi Kitamura, Atsushi Asano, Chikako T. Nakazawa, Takuzo Kurotsu (Department of Applied Chemistry, National Defense Academy, Japan)
- P-098** Solid-state NMR for polymer thin film devices
Y ○ Toshiki Obata, Naoki Asakawa (Department of Chemistry and Chemical Biology, Graduate School of Engineering, Gunma University, Japan)
- P-099** Crystallization mechanism of poly (nonamethyleneterephthalamide) as studied by solid state NMR
 ○ Keisuke Sunaga, Hiroki Uehara, Takeshi Yamanobe (Department of Chemistry and Chemical Biology, Gunma University, Japan)

- P-100** Formation of Carbamates and Cross-linking of Microbial Poly (ϵ -L-lysine) Studied by ^{13}C and ^{15}N Solid-State NMR
Shiro Maeda¹, [○]Ken Takagi¹, Shota Kaneko¹, Ko-Ki Kunimoto² (¹Division of Applied Chemistry and Biotechnology, Graduate School of Engineering, University of Fukui, Japan, ²Division of Material Engineering, Graduate School of Natural Science and Technology, Kanazawa University, Japan)
- P-101** Solid State NMR Study on Microbial Poly (ϵ -L-lysine) /Carboxymethyl Cellulose Blend Films and Hydrogels
Shiro Maeda¹, [○]Mina Kobayashi¹, Kumiko Kato¹, Ko-Ki Kunimoto² (¹Division of Applied Chemistry and Biotechnology, Graduate School of Engineering, University of Fukui, Japan, ²Division of Material Engineering, Graduate School of Natural Science and Technology, Kanazawa University, Japan)
- P-102** Characterization of microbial poly (γ -glutamic acid)s with different D/L ratio by solid NMR
Shiro Maeda, [○]Shingo Oumae, Kazumasa Oiwa (Division of Applied Chemistry and Biotechnology, Graduate School of Engineering, University of Fukui, Japan)

Solid NMR (application to materials science)

- P-103** Reorientational motion of BD_4 ion in LiBD_4 as studied by solid-state NMR
[○]Keiko Jimura, Shigenobu Hayashi (Research Institute of Instrumentation Frontier, National Institute of Advanced Industrial Science and Technology (AIST), Japan)
- P-104** Alkali effects on structure and viscosity in R_2O ($\text{R}=\text{Li, Na, K, Rb, Cs}$)- $\text{CaO-Al}_2\text{O}_3\text{-SiO}_2$ glasses and melts
[○]Koji Kanehashi¹, Yuta Shimamura², Sohei Sukenaga² (¹Advanced Technology Research Laboratories, Nippon Steel Corporation, Japan, ²Department of Material Science and Engineering, Kyushu University, Japan)
- P-105** Characterization of zeolite acid site by solid-state ^1H and ^{27}Al NMR spectroscopy in combination with NH_3 TPD
[○]Mie Nayuki¹, Yasuhiro Hashimoto^{1,2}, Ryusuke Miyazaki³, Kenji Akagishi³ (¹Analysis & Simulation Center, Asahi Kasei Corporation, Japan, ²Strategic Planning & Development, Asahi Kasei Corporation, Japan, ³Catalyst Laboratory, Asahi Kasei chemicals Corporation)
- P-106** Surface acid property of zeolites studied by solid-state NMR
[○]Natsuko Kojima, Shigenobu Hayashi (Research Institute of Instrumentation Frontier, National Institute of Advanced Industrial Science And Technology (AIST), Japan)
- P-107** Quantitative tracing of electrolyte ions in the EDLC system using solid-state NMR
[○]Keiko Ideta¹, Yusuke Shingai², Masaki Saito², Jin Miyawaki¹, Isao Mochida³, Seong-ho Yoon^{1,2} (¹Institute for Materials Chemistry and Engineering, Kyushu Univ., Japan, ²Interdisciplinary Graduate School of Engineering Sciences, Kyushu Univ., Japan, ³Research and Education Center of Carbon Resource, Kyushu Univ., Japan)
- P-108** Evaluation of hydrogen gas dissolved in rubber material of O-ring for high-pressure Vessels
[○]Hirotsuda Fujiwara¹, Junichiro Yamabe^{1,2}, Shin Nishimura^{1,3} (¹The Research Center for Hydrogen Industrial Use and Storage, AIST, ²International Research Center for Hydrogen Energy, Kyusyu University, ³Department Mechanical Engineering, Faculty of Engineering, Kyusyu University)
- P-109** Withdraw
- P-110** Investigation of Effects of Fluxing Agent Addition on Structural Transition of Coal Ashes by Solid-State NMR
Y
[○]Xiongchao Lin¹, Keiko Ideta², Jin Miyawaki², Isao Mochida³, Seong-Ho Yoon^{1,2} (¹Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Japan, ²Institute for Materials Chemistry and Engineering, Kyushu University, Japan, ³Research and education center of carbon resource, Kyushu University, Japan)
- P-111** Solid state NMR analysis of metal pyrophosphate composites as proton conductor
[○]Masakazu Nishida¹, Tomoko Tanaka¹, Haruhiko Fukaya¹, Wataru Kanematsu¹, Takashi Hibino² (¹National Institute of Advanced Industrial Science and Technology, Japan, ²Graduate School of Environmental Studies, Nagoya University, Japan)

- P-112** Solid-state NMR study of the local arrangement of C₆₀ molecules in C₆₀-graphite nanocomposite
 ○ Daisuke Kuwahara¹, Daisuke Inoue¹, Masaru Suzuki¹, Toshikazu Nakamura², Makoto Ishikawa³, Koji Miura³
 (¹The University of Electro-Communications, Japan, ²Institute for Molecular Science, Japan, ³Aichi University of Education, Japan)
- P-113** Solid-state ¹⁹F NMR study on the chemical state of trace amounts of fluorine in CaO-SiO₂ and CaO-Al₂O₃-SiO₂ systems
 ○ Takafumi Takahashi, Koji Kanehashi (Advanced Technology Research Laboratories, Nippon Steel Corporation, Japan)
- P-114** Application of very fast magic angle spinning module in the solid state with a sample tube diameter of 1mm to characterization of mass-limited materials
 ○ Yu Suzuki¹, Koji Yazawa¹, Yuko Miwa², Tadashi Shimizu³, Katsuya Hioka⁴, Yusuke Nishiyama⁴, Atsushi Asano⁵, Yoshitaka Ishii⁶, Tetsuo Asakura¹ (¹Tokyo University of Agriculture and Technology, Japan, ²Toray Research center, Japan, ³National Institute for Materials Science, Japan, ⁴JEOL RESONANCE, Japan, ⁵National Defense Academy, Japan, ⁶University of Illinois at Chicago, USA)
- P-115** Ex-situ ⁷Li MAS NMR of a lithium cobalt oxide thin film on sequential annealing
Y ○ Yasuto Noda¹, Munehiro Inukai², Kazuyuki Takeda¹ (¹Division of Chemistry, Graduate School of Science, Kyoto University, Japan, ²Institute for Integrated Cell-Material Sciences, Kyoto University, Japan)
- P-116** Study of phase structures in metal deuterides using two-dimensional one pulse spectroscopy
 ○ You Suzuki, Shigenobu Hayashi (National Institute of Advanced Industrial Science and Technology (AIST), Japan)
- P-117** Solid-state NMR analysis of molecular orientations in organic light-emitting diodes
 ○ Masashi Fukuchi, Tatsuya Fukushima, Hironori Kaji (Institute for Chemical Research, Kyoto University, Japan)
- P-118** Solid-State NMR Study of Molecular Dynamics of Imidazole Related to Proton Conductivity
 ○ Tsuyoshi Umiyama, Ryutaro Ohashi, Tomonori Ida, Motohiro Mizuno (Department of Chemistry, Graduate School of Natural Science and Technology, Kanazawa University, Japan)
- P-119** Pulsed NMR Evaluation on Curing Process of Epoxy Resin and Thermal Behavior of Cured Resin
 ○ Takuzo Kurotsu, Atsushi Asano, Hiroki Kimoto, Chikako Nakazawa (Department of Applied Chemistry, National Defense Academy, Japan)
- P-120** Dynamics of water molecules in mesoporous silica SBA-15 as studied by ²H NMR
 ○ Tatsuya Miyatou¹, Kouichi Sazanami¹, Ryutaro Ohashi¹, Motohiro Mizuno¹, Shigeharu Kittaka²
 (¹Department of Chemistry, Graduate School of Natural Science and Technology, Kanazawa University, Japan, ²Department of Chemistry, Faculty of Science, Okayama University of Science, Japan)

Solid NMR (liquid crystals, membranes)

- P-121** Detection of local structural and dynamics changes around Tyr residues in Bacteriorhodopsin corresponding to the changes of two isomers of retinal by solid-state NMR
 ○ Miyako Horigome¹, Hirohide Nishikawa¹, Izuru Kawamura¹, Satoru Tuzi², Takashi Okitsu³, Akimori Wada³, Akira Naito¹ (¹Graduate School of Engineering, Yokohama National University, Japan, ²Graduate School of Life Science, University of Hyogo, Japan, ³Kobe Pharmaceutical University)
- P-122** Solid-state NMR analysis of H⁺-ATP synthase subunit c-ring from *Thermophilic Bacillus*
 ○ Su-Jin Kang¹, Suyeon Bak¹, Yasuto Todokoro^{2,3}, Ikuko Yumen², Iku Iwasaki², Toshiharu Suzuki⁴, Toshimichi Fujiwara², Masasuke Yoshida^{4,5}, Hideo Akutsu^{1,2} (¹Department of Biophysics and Chemical Biology, Seoul National University, Korea, ²IPR, Osaka University, Japan, ³Nano. Bio., Yokohama City University, Japan, ⁴JCORP, JST, Japan, ⁵Faculty of Engineering, Kyoto Sangyo University, Japan)

P-123 The structure of retinal protein on activated state as revealed by *in-situ* photo-irradiated solid-state NMR.

Y

○ Yuya Tomonaga¹, Izuru Kawamura¹, Akimori Wada², Takashi Okitsu², Yuki Sudo³, Naoki Kamo⁴, Akira Naito¹ (¹Graduate School of Engineering, Yokohama National University, Japan, ²Kobe Pharmaceutical University, Japan, ³Nagoya University, Japan, ⁴Matsuyama University, Japan)

P-124 Anisotropies of Higher Ordered Structures and Gas Diffusion of Liquid Crystalline All Aromatic Polyester with *n*-Alkyl Side Chain

○ Hiroaki Yoshimizu (Graduate School of Engineering, Nagoya Institute of Technology, Japan)

NMR imaging

P-125 Development of a solar-cell powered compact MRI system for long-term measurements of outdoor trees

○ Takeshi Kimura¹, Yuto Geya¹, Katsumi Kose¹, Yasuhiko Terada¹, Tomoyuki Haishi², Kazuma Togashi², Hiroshi Gemma³, Yoshihiko Sekozawa³ (¹Institute of Applied Physics, University of Tsukuba, Japan, ²MRTechnology Inc, Japan, ³Agricultural and Forestry Research Center, University of Tsukuba, Japan)

P-126 Three Dimensional Motion Artifact Correction for Hand MR Images of Children

○ Daiki Tamada, Katsumi Kose (Institute of Applied Physics, University of Tsukuba, Japan)

P-127 Quantitative multinuclear MRI

○ Ryo Yamada, Naoki Ichijo, Kiyonori Takegoshi, Kazuyuki Takeda (Division of Chemistry, Graduate School of Science, Kyoto University, Japan)

P-128 MRI Study of vascular grafts based on silk fibroin fibers

○ Shigeki Kuroki¹, Koji Yazawa², Kotaro Isobe², Tetsuo Asakura² (¹Department of Organic and Polymeric Materials, Tokyo Institute of Technology, Japan, ²Department of Biotechnology, Tokyo University of Agriculture and Technology, Japan)

P-129 Hyperpolarized ¹²⁹Xe magnetic resonance imaging in rat lung

○ Mineyuki Hattori¹, Tomokazu Numano^{1,2}, Koji Hyodo¹, Kazuhiro Homma¹ (¹National Institute of Advanced Industrial Science and Technology, Japan, ²Tokyo Metropolitan University, Japan)

In vivo NMR, metabolomics, molecular imaging

P-130 Metabonomics sequences as a tool to visualize the complex metabolic dynamics of superorganisms

○ Yasuhiro Date^{1,2}, Tomohiro Iikura², Jun Kikuchi^{1,2,3,4} (¹RIKEN Plant Science Center, Japan, ²Graduate School of Nanobiosciences, Yokohama City University, Japan, ³Biomass Engineering Program, RIKEN Research Cluster for Innovation, Japan, ⁴Graduate School of Bioagricultural Sciences, Nagoya University, Japan)

P-131 Contribution of chemical exchange to R₂ in agarose and gelatin gels

○ Nobuhiro Takaya, Hidehiro Watanabe, Fumiyuki Mitsumori (National Institute for Environmental Studies, Japan)

P-132 Application of Statistical Correlation Method for Understanding Complex Gut Ecosystem

Y

○ Shinji Fukuda^{1,2}, Yumiko Nakanishi³, Yasuhiro Date³, Hiroshi Ohno^{1,2}, Jun Kikuchi^{2,3} (¹RIKEN Research Center for Allergy and Immunology, Japan, ²Graduate School of Nanobioscience, Yokohama City University, Japan, ³RIKEN Plant Science Center)

P-133 Medical Applications of Metabolomics by ¹H-NMR IV Chiral Separation of Lactate in Renal Dialysate

○ Seizo Takahashi¹, Ichiro Ando¹, Yutaka Imai¹, Kazuhisa Takeuchi^{1,2}, Masako Fujiwara¹ (¹Grad. Sch. Pharm. Sci., Tohoku Univ., Japan, ²Koujinkai Clinic CKD Cnt., Japan)

P-134 An effective assessment of simvastatin-induced toxicity with NMR-based metabonomics approach

○ Sunmi Kang¹, Hye-ji Yang¹, Myung-Joo Choi², He Wen¹, Hyuk Nam Kwon¹, Kyung Hee Jung², Sang-Won Hong², Joon Mee Kim³, Soon-Sun Hong², Sunghyounk Park¹ (¹Department of Biochemistry, ²Department of Biomedical Sciences, ³Department of Pathology, Inha University Hospital and Center for Advanced Medical Education by BK21 project, College of Medicine, Inha University, Korea)

P-135 Withdraw

Calculation, simulation, data processing

- P-136** Development of interferogram extrapolation method for NMR experiments that requires accurate peak height
○ Takumi Ueda¹, Masahiko Matsumoto¹, Ichio Shimada^{1,2} (¹Graduate School of Pharmaceutical Sciences, the University of Tokyo, Japan, ²BIRC, AIST, Japan)
- P-137** New server systems based on virtual computing for the database BMRB and MagRO-Tools for NMR analysis.
○ Naohiro Kobayashi, Takeshi Iwata, Yoko Harano, Chojiro Kojima, Haruki Nakamura, Toshimichi Fujiwara (Institute for Protein Research, Osaka University, Japan)
- P-138** Software tool for sequence-specific resonance assignment of proteins using the lanthanide probe method
○ Masashi Yokochi, Tomohide Saio, Fuyuhiko Inagaki (Faculty of Advanced Life Science, Hokkaido University, Japan)
- P-139** Laplace Transformation of FID Signal: A high-precise Pole Estimation Method by Excess High-order ARMA Approximation and Choice of Poles by their Peak Power
○ Tomoki Nakao¹, Gota Kawai², Toshihiro Furukawa¹, Hajime Kubota³ (¹Department of Industrial Engineering, Tokyo University of Science, Japan, ²Department of Life and Environmental Sciences, ³Department of Electrical, Electronic and Computer Engineering, Chiba Institute of Technology, Japan)
- P-140** Boosting Protein Dynamics Studies Using Quantitative Non-Uniform Sampling NMR Spectroscopy
Yoh Matsuki¹, Tsuyoshi Konuma², Toshimichi Fujiwara¹, ○ Kenji Sugase² (¹Institute for Protein Research, Osaka University, Japan, ²Bioorganic Research Institute, Suntory Foundation for Life Sciences, Japan)
- P-141** NMR structure refinement by torsion angle molecular dynamics simulation using a physical force field in CYANA
○ Tepppei Ikeya¹, Masaki Mishima¹, Yutaka Ito¹, Peter Güntert^{2,3,4} (¹Graduate School of Science, Tokyo Metropolitan University, Japan, ²Center for Priority Areas, Tokyo Metropolitan University, Japan, ³Institute of Biophysical Chemistry, Goethe-University, Germany, ⁴Frankfurt Institute of Advanced Studies, Goethe-University, Germany)
- P-142** Substructure search using two types of matching of bipartite graphs associated with NMR chemical shift data
○ Shungo Koichi¹, Hiroyuki Koshino², Hiroko Satoh³ (¹Department of Systems Design and Engineering, Nanzan University, Japan, ²RIKEN Advanced Science Institute, Japan, ³National Institute of Informatics, Japan)
- P-143** CLEAN Processing of Randomly Sampled Multi-Dimensional NMR Data
○ Junichi Kurita¹, Jun Ashida¹, Ēriks Kupčē² (¹Agilent Technologies Inc., Japan, ²Agilent Technologies, 6 Mead Rd., UK)
- P-144** The application of phase-statistical de-noising method to quantitative analysis
Y ○ Jun Fukazawa^{1,2}, K. Takegoshi², Kazuyuki Takeda², Michio Murata^{1,3} (¹ERATO Lipid Active Structure Project, Graduate School of Science, Osaka University, Japan, ²Department of Chemistry, Graduate School of Science, Kyoto University, Japan, ³Department of Chemistry, Graduate School of Science, Osaka University, Japan)

Development of equipment

- P-145** Elemental analysis by NMR
Y ○ Naoki Ichijo, Kazuyuki Takeda, K. Takegoshi (Division of Chemistry, Graduate School of Science, Kyoto University, Japan)

- P-146** Narrowbore HFXY Quad-resonance Probe for Solid State NMR
○ Jun Ashida (Agilent Technologies Japan Ltd.)
- P-147** Cryocoil MAS with the closed-cycle refrigerating system
○ Takashi Mizuno^{1,3}, Yasuto Noda^{2,3}, K. Takegoshi^{2,3} (¹JEOL RESONANCE Inc., Japan, ²Dept. of chemistry, Graduate school of science, Kyoto University, Japan, ³SENTAN/JST, Japan)

P-148 Withdraw

Others

- P-149** Characterization of cellulosic supramolecular structures using solid- and solution-state NMR with stable isotope labeling
○ Tatsuki Ogura¹, Yasuhiro Date^{1,2}, Yuuri Tsuboi³, Jun Kikuchi^{1,2,4,5} (¹Grad. Sch. Nanobio., Yokohama City Univ., Japan, ²RIKEN Plant Sci. Cent., Japan, ³RIKEN Adv.Sci. Inst., Japan, ⁴Grad. Sch. Bioagri., Nagoya Univ., Japan, ⁵Biomass Eng. Prog., RIKEN Res. Clust. Innov.)
- P-150** Evaluation the mobility of rubber molecule exposed to high-pressure hydrogen gas
○ Hiroaki Ono¹, Hirotada Fujiwara², Jyunichiro Yamabe^{2,3}, Shin Nishimura^{2,4} (¹School of Engineering, Kyushu University, Japan, ²The Research Center for Hydrogen Industrial Use and Storage, AIST, Japan, ³International Research Center for Hydrogen Energy, Kyusyu University, Japan, ⁴Department Mechanical Engineering, Faculty of Engineering, Kyusyu University, Japan)
- P-151** Comparative metabolomics of compositional variations and diversities in plant biomass from hydrosphere
○ Kenji Sakata¹, Yasuhiro Date^{1,2}, Jun Kikuchi^{1,2,3,4} (¹Graduate School of Narobioscience, Yokohama City University, Japan, ²RIKEN Plant Science Center, Japan, ³Biomass Engineering Program, RIKEN Research Cluster for Innovation, Japan, ⁴Graduate School of Bioagricultural Sciences, Nagoya University, Japan)
- P-152** Withdraw
- P-153** Detection of illegal drugs by nuclear quadrupole resonance
○ Junichiro Shinohara, Bryn Baritomba, Hideo Sato-Akaba, Hideo Itozaki (Graduate school of Engineering Science, Osaka University, Japan)
- P-154** Accurate purity calibration of pesticides using NMR
○ Takeshi Saito, Yoko Ohte, Masayo Murakami, Toshihide Ihara (Chemical Measurement System Section, Measurement Standards System Division, National Metrology Institute of Japan, AIST, Japan)
- P-155** Variable Lymphocyte Receptor (VLR), a good candidate for antibody alternatives
○ Byung Woo Han (Department of Pharmacy, Seoul National University, Korea)