Poster Presentation

Nov. 2 (Sat) Lobby on 1F/2F

15:10～16:20 Even number presentation (First half)
16:20～17:30 Odd number presentation (Second half)
※Underlined presentations are nominated to the Poster Award

P-01 **Evaluation of Antioxidants/HALS in Polymers Using ESR Method**

Hideyuki Hara
BioSpin Div. Bruker Japan K.K.

P-02 **Mechanism of Tissue Oxygen Level Dependent (TOLD) MRI Signal**

Ken-ichiro Matsumoto[1], Hiromi Sano[2], Shan Gao[2], Megumi Ueno[1], Raj Kumar Parajuli[3,4], Kensuke Osada[2], Takayuki Obata[2], Ichio Aoki[2], Akira Sumiyoshi[2]
[1]NIRS, QST; [2]Inst. Quant. Med. Sci., QST; [3]Inst. Quant. Life Sci., QST; [4]Sydney Univ.

P-03 **Fabrication of a film-type stripline for force detection ENDOR measurement**

○Ryosuke Onogi[1], Yuya Ishikawa[1], Hideyuki Takahashi[2], Eiji Ohmichi[3], Konami Izumi[4], Hirobumi Ushijima[4], Yutaka Fujii[1]
[1]FIR-Center., Univ.of Fukui; [2]Technoassist Corp.; [3]Grad. Sch. of Sci., Kobe Univ.; [4]AIST.

P-04 **Involvement of reactive oxygen species in the mechanism of vitamin K_3 toxicity enhancement by TEMPOL**

○Shoko Okazaki, Kana Sakuragi, Yuiko Imahuku, Kanako Kobayashi, Risako Tashiro, Mai Kaieda, Maiko Noshita, Yuhei Ohta, Keizo Takeshita
Fac. of Pharmaceu. Sci., Sojo Univ.

P-05 **Study of the binding state of amyloid β and iron ions using γ-ray irradiation**

○Maoto Nakayama[1], Kazuki Koizumi[1], Eiji Ohmichi[1], Hitoshi Ohta[2], Sachiko Tojo[3]
[1]Grad. Sch. of Sci., Kobe Univ.; [2]Molecular Photosci. Res. Center, Kobe Univ.; [3]SANKEN, Osaka Univ.

P-06 **Development of millimeter-wave band electron spin resonance system using a compact gyrotron and pulsed high-field magnet**

○K. Kawagita[1], T. Ito[1], Y. Ishikawa[1], M. Akaki[2], Y. Narumi[3], M. Hagiwara[3], Y. Fujii[1]
[1]FIR-Center, Univ. of Fukui; [2]IMR, Tohoku Univ.; [3]Grad. Sch. of Sci., Osaka Univ.

P-07 **Development of ultra-small microwave resonators for electron spin resonance measurements**

○Y. Kurachi[1], Y. Fujii[1], Y. Ishikawa[1], J. Järvinen[2], S. Vasiliev[2]
[1]Res. Center for Develop. of FIR, Univ. of Fukui; [2]Univ. of Turku.

P-08 **Development of sensitive ultra-high pressure ESR measurements technique using diamond NV centers**

○Ayumu Shimizu[1], Takahiro Sakurai[2], Susumu Okubo[1, 3], Hitoshi Ohta[3], Masazumi Fujiwara[4]

[1]Graduate School of Science, Kobe University; [2]Research Facility Center for Science and Technology, Kobe University; [3]Molecular Photoscience Research Center, Kobe University; [4]Graduate School of Environmental, Life, Natural Science and Technology, Okayama University

P-09 **Development of terahertz ESR system and optical devices using a 3D printer**

○Ryo Hirata[1], Kazuma Segawa[1], Susumu Okubo[1,2], Hitoshi Ohta[2], Nobuyuki Kurita[3], Hidekazu Tanaka[3]

[1]Grad. Sch. of Sci., Kobe Univ.; [2]MPRC, Kobe Univ.; [3]Grad. Sch. of Sci. and Eng., Tokyo Inst. of Tech.

P-10 **Electrically Detected Magnetic Resonance on π-conjugated polymer blends**

Yusuke Inagawa[1], Kunito Fukuda[1], Naoki Asakawa[1]

[1]Grad. Sch. Sci. Tech, Gunma Univ.

P-11 **Analysis of Radical Species Formed in Electron Beam Irradiated Polyamide**

○OKADA Kohei[1], KINASHI Kenji[2], SAKAI Wataru[2]

[1]Grad. Sch. of Sci. Tech, Kyoto Inst. of Tech.; [2]Fac. of Mat. Sci., KIT.

P-12 **ESR of acridan-triazine-based thermally active delayed fluorescent molecules**

○Kyosuke Oki[1], Mikaru Masuda[1], Tomoaki Miura[1],Sota Kasuya[1], Joel Hao Jorolan[1,2],Hironori Kaji[3], Tadaaki Ikoma[1,4]

[1] Grad. Sch. of Sci. & Tech., Niigata Univ.; [2]College of Sci. and Math., MSU-IIT;Philippines.; [3]ICR, Kyoto Univ.; [4]CCRF, Niigata Univ.

P-13 **Effect of ionic strength on dynamic electron spin polarization generated by photoirradiation of xanthene dye-nitroxide radical aqueous solution**

○Masatoshi Kato[1], Akio Kawai[1]

[1]Grad. Sch. of Sci., Kanagawa Univ.

P-14 **Development and application of a magnetization-detecting multi-frequency ESR system using a high-power light source Gyrotron**

○Takero Ito[1], Yuya Ishikawa[1], Eiji Ohmichi[2], Hideyuki Takahashi[3], Hitoshi Ohta[1, 4], Masafumi Fukunari[1], Yuusuke Yamaguchi[1], Yoshinori Tatematsu[1], Yutaka Fujii[1]

[1]FIR-Center, Univ. of Fukuii; [2]Grad. Sch. of Sci., Kobe Univ.; [3]Technoassist Corp.; [4]Mol. Photosci. Res. Center, Kobe Univ.

P-15 **Electronic structure and molecular dynamics of perfluorocubane radical anions**

○Kenji Komaguchi[1], Midori Akiyama[2]

[1]Grad. Sch. of Adv. Sci. Eng., Hiroshima Univ.; [2]Grad. Sch. of Eng., Kyoto Univ.

P-16 **Mechanistic Study of the Reaction Between Superoxide Radical and Phenolic Compounds in Aqueous Solution by Flow-Injection ESR System**

○Yasuhiro Sakurai[1], Shuhei Yamaguchi[2], Lu Yao[2], Tomoyuki Yamashita[2], Kenji Kanaori[2], Kunihiko Tajima[2]
[1]NIT, Akashi College.; [2]Kyoto Institute of Technology.

P-17 **X and Q bands Time-Resolved EPR Spectra in Dyads Consisting of Zn(II) Porphyrin and Re(I) Diamine Complexes: Connecting Position Dependence**

○Tomohiro Suzuki[1], Tomoka Takase[1], Shunsuke Fujita[1], Motoko S. Asano[1], Yuto Suzuki[2], Akiharu Satake[2], Yusuke Kuramochi[3]
[1]Gunma Univ.; [2]Tokyo Univ of Sci.; [3]Tokyo Univ.

P-18 **Analysis of Intramolecular Singlet Fission Mechanism in Tetracene Oligomer by Time-Resolved EPR**

○Masahiro Tanaka[1], Masaaki Fuki[1,2], Shunta Nakamura[3], Hayato Sakai[3], Taku Hasobe[3], Yasuhiro Kobori[1,2]
[1]Grad. Sch. of Sci., Kobe Univ.; [2]Mol. Photosci. Res. Ctr., Kobe Univ.; [3]Fac. of Sci. and Tech., Keio Univ.

P-19 **Photoinduced charge separation structure in Y-series non-fullerene acceptor-based organic thin film solar cell observed by time-resolved EPR and pulse EPR**

○Sota Tsujimura[1], Yasuhiro Kobori[1,2], Hiroshi Imahori[3], Tomokazu Umeyama[4], ZHANG Yuzhe [3]
[1]Grad. Sch. of Sci., KOBE Univ.; [2]Mol. Photosci. Res. Ctr., Kobe Univ.; [3] Grad. Sch. of Eng., KYOTO Univ.; [4] Grad. Sch. of Eng., HYOGO Univ.;

P-20 **Elucidation of the Reaction Mechanism of Photocatalytic Decarboxylation Using Time-Resolved EPR Method**

○Daiki Tomiya[1], Takeshi Inoue[2], Masaaki Fuki[3], Tsubasa Okamoto[3], Harunobu Mitsunuma[2], Motomu Kanai[2], Yasuhiro Kobori[3]
[1]Grad. Sch. of Sci., Kobe Univ.; [2]Grad. Sch. of Phar. Sci., The Univ. of Tokyo; [3]Kobe Univ. MPRC

P-21 **Radical Reaction Analysis on Modification of Rubber Materials**

○NAOE Shota[1], NAKANE Kai[2], KINASHI Kenji[3], SAKAI Wataru[3]
[1]Grad. Sch. of Sci. Tech, Kyoto Inst. of Tech.; [2]Sch. of Sci. Tech., KIT; [3]Fac. of Mat. Sci., KIT.

P-22 **Observation of reaction intermediate radicals between 3-methyl-1-pyridin-2-yl-5-pyrazolone as an edaravone derivative and hydroxyl radical**

○Takuya Fukura, Koki Tsuchiya, Yusuke Miyake, Kenji Kanaori
Kyoto Tech.

P-23 **ESR analysis of the thermal degradation of amine-based CO_2 absorbents**

○Yoji Yamaguchi, Takatoshi Sawai, Yuki Asanuma, Ryoichi Kumazawa
Toray Research Center, Inc.

P-24 **Analysis of Thermo-Oxidative Degradation of Polypropylene**

○YUASA Mikito[1], KINASHI Kenji[2], SAKAI Wataru[2]

[1]Grad. Sch. of Sci. Tech, Kyoto Inst. of Tech.; [2]Fac. of Mat. Sci., KIT.

P-25 **Carbon isotope enrichment of photochemical reaction products of benzophenone using magnetic resonance**

○Takeshi Wada[1], Akihiro Tateno[1], Hiroki Nagashima[1,2], Kiminori Maeda[1], Tomoaki Yago[1], Masanobu Wakasa[1]

[1]Grad. Sch. Sci. Eng., Saitama Univ.; [2]QST

P-26 **Structural fluctuations of heterochromatin protein by site-directed spin-labeling PELDOR/DEER spectroscopy and molecular dynamics simulation**

○Ihan Jo[1], Yusei Ninomiya[1], Ena Hirai[1], Kazuo Toyota[1], Daisuke Shiomi[1], Isao Suetake[2], Toshiaki Arata[1], Takeji Takui[1], Kazunobu Sato[1]

[1]Grad. Sch. of Sci., Osaka Metropolitan Univ.; [2]Nakamura Gakuen Univ.

P-27 **Mechanistic analysis of magnetic field effects exhibited by the modified *As*LOV2 domain**

○Shogo Ono, Noboru Ikeya, Jonathan R. Woodward

Graduate School of Arts and Sciences, The University of Tokyo

P-28 **A numerical study of spatial resolution on 4D spectral-spatial EPR imaging**

He Huiqian, Hiroshi Hirata

Grad. Sch. of Info. Sci. and Tech., Hokkaido Univ.

P-29 **Evaluation of a quasi-optical system for pulsed ESR using a gyrotron**

○Yamato Katayama[1], Masato Takahashi[1], Naoto Nakane[2], Takayuki Asano[2], Yuya Ishikawa[1], Yutaka Fujii[1], Seitaro Mitsudo[1,2]

[1] FIR-C., Univ. of Fukui.; [2]Dept. Of Phys., Univ. of Fukui.

P-30 **Application of thermally detected terahertz ESR spectroscopy to protein solution samples**

○Kojima Taiki[1], Eiji Ohmichi[1], Hitoshi Ohta[1,2]

[1]Grad. Sch. of Sci., Kobe Univ.; [2]Mol.Phtosci. Res. Center

P-31 **Development of RF phase automatic adjustment for sub-GHz CW-EPR**

○Tsukasa Sakai[1], Hideo Sato-Akaba[2]

[1]Grad. Sch. of Eng. Sci., Osaka Univ.; [2]Grad. Sch. of Eng., Shizuoka Univ.

P-32 **Development of parallel computation code for algebraic reconstruction methods in 3D and 4D EPR imaging**

Mai Taguchi[1], Shingo Matsumoto[2], Hiroshi Hirata[2]

[1]Grad. Sch. of Info. Sci. & Tech.; [2]Faculty of Info. Sci. & Tech., Hokkaido Univ.

P-33 **Relativistic quantum chemical calculations of fine structure splittings of boron isoelectronic sequence using a quantum phase difference estimation algorithm**

○Kenji Sugisaki[1,2,3], V. S. Prasannaa[3], Satoshi Ohshima[4], Takahiro Katagiri[5], Yuji Mochizuki[6,7], B. K. Sahoo[8], B. P. Das[3,9]

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P-34 **Development of a 3D EPRI/MRI AUtomatic Coregistration System for Measuring Oxygen Partial Pressure in Tumor Tissue**

Tatsuma Deguchi[1], Shingo Matsumoto[2], Hiroshi Hirata[2]

[1]Grad. Sch. of Info.Sci and Tech., Hokkaido Univ.; [2]Facul. of Info. Sci.and Tech., Hokkaido Univ.

P-35 **Construction of a resolution evaluation method that takes into account lensing effects caused by high-frequency magnetic fields**

○Nana Tomita[1], Shingo Matsumoto[2], Hiroshi Hirata[2]

[1]Grad. Sch. of Info. Sci. and Tech., Hokkaido Univ.; [2]Facul. of Info. Sci. and Tech., Hokkaido Univ.

P-36 **Detection Sensitivity Improvement of Electron Paramagnetic Resonance Spectroscopy using Multi-Harmonic Detection: Signal-to-Noise Ratio Enhancement and Linewidth Recovery**

Shuto Nadanami[1], Shingo Matsumoto[2], Hiroshi Hirata[2]

[1]Grad. Sch. of Info. Sci. & Tech., [2]Faculty of Info. Sci. & Tech., Hokkaido University

P-37 **Development of a Numerical Method for Improving EPR Image Resolution of Irradiated Bovine Tooth**

○Oki Mitarai[1], Shingo Matsumoto[2], Hiroshi Hirata[2]

[1]Grad. Sch. of Info. Sci. & Tech.; [2]Faculty of Info. Sci. & Tech., Hokkaido University

P-38 **Relationship between ESR spectra and electrical properties of SiOC thin films**

○Takatoshi Sawai, Yoji Yamaguchi, Shino Kosaka, Shigeru Yoshimoto, Ryu Suzuki, Tetsuro Ota, Keiko Inoue, Yusaku Tanahashi

Toray Research Center, Inc.

P-39 **THz ESR measurements of Co-doped $BiFeO_3$**

○Shunsuke Ishii[1], Arata Morimitsu[1], Susumu Okubo[1,2], Shigeo Hara[3], Takahiro Sakurai[3], Hitoshi Ohta[2], Hajime Yamamoto[4], Masaki Azuma[5,6]

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P-40 **Development of measurement system and preparation of low-dope Si:P sample for high-sensitive electrically-detected mm-wave ESR**

○Hayato Ito[1], Akinori Ohashi[1], Yutaka Kurachi[1], Kanata Hayashi[1], Yuya Ishikawa[1], Akira Fukuda[2], Masayoshi Mori[3], Akira Oiwa[3], Yutaka Fujii[1]

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P-41 **ESR-Spectroscopy Study on Charge States in Dopant-Free-Polymer Hole-Transport Layers in Lead-Based Perovskite Solar Cells**

○Yuta Utsumi[1], Seira Yamaguchi[1,2], Atsushi Sato[1], Kazuhiro Marumoto[1,2,3]

[1]Univ. of Tsukuba; [2]OIQSST, Univ. of Tsukuba; [3]TREMS, Univ. of Tsukuba

P-42 **Magnetic field dependence of transport properties of lightly P-doped Si for electrically-detected electron spin resonance**

○A. Ohashi[1], Y. Kurachi[1], K. Hayashi[1], Y. Ishikawa[1], A. Fukuda[2], X. -F. Liu[3], G. M. Gabriel[3], A. Oiwa[3], Y. Fujii[1]

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P-43 **Direct Observation of Charge Transfer in Tin-Lead Perovskite Solar Cells using Fullerene Derivatives as Interface Modifiers by Electron Spin Resonance**

○Shintaro Kaneko[1], Seira Yamaguchi[1,2], Yukihiro Shimoi[1], Atsushi Sato[1], Minh Anh Truong[3], Tomoya Nakamura[3], Atsushi Wakamiya[3], Kazuhiro Marumoto[1,2,4]

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P-44 **Magnetic Properties of frustrated magnets, $MCu_3(OH)_6Cl_2$(M=Co, Ni)**

○S. Kojima[1], Y. Fujii[2], H. Kikuchi[1], A. Matsuo[3], K. Kindo[3]

[1]Dep. Appl. Phys., Univ. of Fukui; [2]FIR Center, Univ. of Fukui; [3]ISSP, Univ. Tokyo

P-45 **Study on NV^- center creation with electron beam irradiation in Ib-type diamond (2)**

○Seiichi Saiki[1], Shinobu Onoda[1], Takeshi Onoda[1]

[1]QUARC, QST

P-46 **ESR spectroscopy study on blue light-emitting electrochemical cells using multiple resonance**

○Yu Takahashi[1], Seira Yamaguchi[1,2], Rika Nanto[1], Mika Nakajima[1], Yukihiro Shimoi[1], Takuji Hatakeyama[3], Kazuhiro Marumoto[1,2,4]

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P-47 **Study of black phosphorus by using cyclotron resonance under pressure**

○M. Nabeta[1], T. Sakurai[2], S. Okubo[3], H. Ohta[3], H. Okamura[4]

[1]Grad. Sch. Sci., Kobe Univ.; [2]Research Facility Center for Science and Technology, Kobe Univ.; [3]Molecular

Photoscience Research Center, Kobe Univ.; [4]Dept. of Applied Chemistry, Tokushima Univ.

P-48 **Development and application of high pressure thermally detected ESR measurement technique**

○Mitsuki Nishita[1], Takahiro Sakurai[2], Eiji Ohmichi [1], Susumu Ohkubo[1,3], and Hitoshi Ohta[3]

[1]Graduate School of Science, Kobe Univ.; [2]Research Facility Center for Science and Technology, Kobe. Univ.; [3]Molecular Photoscience Research Center, Kobe Univ.

P-49 **Development of Free Space ESR and Application**

Hiroyuki Nojiri

IMR, Tohoku Univ.

P-50 **High Frequency ESR measurement of S = 1/2 quantum magnet $C_9H_{18}N_2CuBr_4$**

○Yuto Hamada[1], Takahiro Sakurai[2], Makoto Saga[2], Shigeo. Hara[2], Susumu Okubo[1,3], Hitoshi Ohta[3], Masayuki Hagiwara[4]

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P-51 **ESR measurements of triangular cupola antiferromagnet $SrCu(OH)_3Cl$**

○Takaya Matsumura[1], Shigeo Hara[2], Takahiro Sakurai[2], Susumu Okubo[1, 3], Hitoshi Ohta[3], Fusako Kon[4], Hiroyuki K. Yoshida[4]

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P-52 **Transient Absorption Spectra and Magnetic Field Effects from Super Cavity Ring Down**

○Sae Fukui, Ayane Kannuki, Tsubasa Kimura, Hiroki Nagashima, Kiminori Maeda

[1]Graduate School of Science and Engineering, Saitama Univ

P-53 **Evaluating spin polarized injection in LECs with ferromagnetic electrodes using EL-detected ESR**

○Moena Yasuda[1], Katsuichi Kanemoto [1,2]

[1]Grad. Sch. of Sci., Osaka Metropolitan Univ.;[2] NITEP.

P-54 **X-band ESR measurements of $BaTiO_3$ sintered by electromagnetically waves**

○Kyosuke Yabushita[1], Yuya Ishikawa[1], La Agusu[1,2], Al Jalali Muhammad[2,3], I Putu Abdi Karya[1,3], Takayuki Asano[3], Seitaro Mitsudo[3], Yutaka Fujii[1]

[1]FIR-Center., Univ.of Fukui;[2]Dept. of Phys., Univ. of Halu Oleo, [3]Dept. of Appl. Phys., Univ. of Fukui

P-55 **ESTN analysis of optically induced EPR signals in solid electrolyte $BaZrO_3$:M (M=Sc, Y)**

Kota Yamaji[1], Ikuko Akimoto[1], Masaya Nagai[2], Yuji Okuyama[3], Hideto Matsuoka[4]

[1]Wakayama Univ.; [2]Osaka Univ.; [3]Miyazaki Univ.; [4]Hokkaido Univ. Edu.

P-56 **The clarification of spin-dependent electrical conduction depending on current density**

○Hiroki Ishihara[1], Kunito Fukuda[1], Naoki Asakawa[1]

[1]Division of Molecular Science, Graduate School of Science and Technology Gunma University

P-57 **Direct Observation of Charge Accumulation in Quantum Dots in Organic Photoelectrochemical Transistors**

○Wenhao He[1], Seira Yamaguchi[1,2], Jiaxi Wang[1], Sayo Okabe[1], Yizhou Chen[1], Yukihiro Shimoi[1], Kazuhiro Marumoto[1,2,3]

[1]Dep. Mater. Sci., Univ. Tsukuba; [2]IQSST, Univ. Tsukuba; [3]TREMS, Univ. Tsukuba

P-58 **ESR study on charge states and molecular orientation in materials used in polymer solar cells by using organic electrochemical transistors**

○Jiaxi Wang[1], Seira Yamaguchi[1,2], Dong Xue[1], Satoshi Inai[1], Yukihiro Shimoi[1], Itaru Osaka [3], Kazuhiro Marumoto[1,2,4]

[1]Dep. of Mater. Sci., Univ. of Tsukuba; [2]OIQSST, Univ. of Tsukuba; [3]Grad. Sch. of Eng., Hiroshima Univ.; [4]TREMS, Univ. of Tsukuba

P-59 **Coordination environment of Manganese high affinity site in photosynthetic photosystem II**

Naohiko Nakamura[1], Shinya Kosaki[1], Hiroyuki Mino[1]

[1]Dep. of Phys., Grad. Sch. Sci., Nagoya Univ.

P-60 **Investigation of high-sensitivity detection for fluorine-containing compounds with photo-CIDNP**

○Shoya Shiromizu[1], Abdelazim Elsayed Elhelaly[1], Koki Nishimura[2], Nobuhiro Yanai[2,3], Masayuki Matsuo[1], Fuminori Hyodo[1]

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