

The 60th Japanese Conference on Calorimetry and Thermal Analysis

Kyoto Prefectural University, September 26-28, 2024

September 26, 2024

- 1M1000** Opening remark
(Sch. Mater. & Chem. Tech., Tokyo Inst. Tech.) ○Junko Morikawa
- 1M1010** The History of the Japan Society of Calorimetry and Thermal Analysis -as a former member of the staff office-
(Tokyo Metro. Univ.) ○Hirohisa Yoshida
- 1M1050** JSCTA in future - Research 30 years later -
(Kyoto Inst. Tech.) ○Yasuo Saruyama
- 1M1120** Discovering the Wonders of Ostriches
(Kyoto Pref. Univ.) ○Yasuhiro Tsukamoto
- 1M1240** Tosa and Kochi University ~What kind of image do you have of “Tosa”?~
(Sci. Tech., Kochi Univ.) ○Fumito Fujishiro
- 1M1250** The Significance of Corporate Professionals Presenting Research at Japanese Conference on Calorimetry and Thermal Analysis
(Toray Res. Center, Inc.) ○Yoshitomo Furushima
- 1M1300** For whom do peptide nanofibers assemble?
(Fac. Sci., Tokyo Univ. Sci.) ○Minami Kurokawa
- 1M1310** Reflecting on Why I Am Here: In the Margins of the JSCTA?
(Fac. Sci. Eng., Kindai Univ.) ○Shigeru Shimamoto
- 1M1320** Challenges in life science and expectations for calorimetry
(Osaka Univ.) ○Seiki Kuramitsu
- 1M1340** How did I become a researcher?
(Sch. Life Sci. & Tech., Tokyo Inst. Tech., Tokyo Inst. Tech.) ○Masayuki Takahashi
- 1M1400** Observing, Understanding, and Utilizing Energy Flow in Proteins
(Grad. Sch. Sci., Osaka Univ.) ○Yasuhisa Mizutani
- 1M1450** The research on phase transition and interaction with gas phase of functional oxides
(CHS, Nihon Univ.) ○Takuya Hashimoto
- 1M1540** Heat dissipation properties of magnetic nanoparticles and their biomedical applications
(Grad. Sch. Eng. Sci., Yokohama Natl. Univ.) ○Yuko Ichiyanagi

A, B, C 16:50-17:40

Flush talks by Poster presenters for young awards

- 1B1740** Approaching to the origins of ribosome by Synthetic biology
(^AEarth-Life Sci. Inst., Tokyo Inst. Tech., ^BCharles Univ., ^CGrad. Sch. Pharm., Kyoto Univ., ^DUniv. Milano, ^EUniv. Chem. & Tech., ^FSch. Life Sci. & Tech., Tokyo Inst. Tech., ^GGrad. Sch. Media & Govern., Keio Univ., ^HCzech Acad. Sci.) ○Tomoko Yamaguchi^{A,B,C}, Simone Codispoli^D, Mikhail Makarov^B, Valerio G. Giacobelli^E, Martin Mašek^E, Michal H. Kolář^E, Alma Carolina Sanchez-Rocha^B, Kosuke Fujishima^{A,F,G}, Giuliano Zanchetta^D, Klára Hlouchová^{B,H}

September 27, 2024

- 2A0850** Effects of diols on phase transitions in phospholipid dilauroylphosphatidylcholine multilamellar membranes (Kyoto Inst. Tech.) ○Daiki Yokoyama, Soichi Tatsumi, Haruhiko Yao
- 2A0910** Excess molar enthalpies, excess molar volumes and those temperature dependence of binary solutions of ethanol + alkanol (A)Grad Sch. Sci. Eng. Tokyo Denki Univ., (B)Fac. Sci. Eng. Tokyo Denki Univ.) ○Motoharu Shimmoto^A, Hideo Ogawa^B, Yuri Yamada^B, Yuuichi Sugawara^B
- 2A0930** Optical Activity of Anesthetic Action: Anesthetic Sensitivity of Lipid Membrane (A)Grad. Sch. Tech. Indus. & Soc. Sci., Tokushima Univ., (B)Grad. Sch. Sci. & Tech. Innov., Tokushima Univ.) ○Hitoshi Matsuki^A, Masaki Goto^A, Ririka Matsushita^B, Nobutake Tamai^B
- 2A0950** Phase Behavior in Human Stratum Corneum Studied by DSC and X-ray Diffraction (A)Nagoya Indust. Sci. Res. Inst. (B)Toray Res. Center Inc., (C)Toray Techno Co., Ltd.) ○Ichiro Hatta^A, Yoshitomo Furushima^B, Masaru Nakada^B, Tsuneyuki Yamane^C
- 2A1010** Binding properties of a novel interaction between ABC transporter chy400_4166 protein in *Chloroflexus aurantiacus* and β -1,2-glucan (A)Fac. Sci., Tokyo Univ. Sci., (B)Fac. Sci. Tech., Tokyo Univ. Sci.) ○Hidetaka Torigoe^A, Rintaro Hirayama^B, Kazuya Kato^B, Masahiro Nakajima^B
- 2A1030** Roles of ATP hydrolysis in homologous recombination (Sch. Life Sci. & Tech., Tokyo Inst. Tech., Tokyo Inst. Tech.) ○Masayuki Takahashi
- 2A1050** Discovery of Keap1-Nrf2 inhibitors using thermodynamic profiles (Central Pharm. Res. Inst., Japan Tobacco Inc.) Rie Hantani, Wataru Asano, Kazuki Otake, Kazuhito Harada, Naoki Ogawa, Akihiro, Nomura, Mariko Maekawa, ○Yoshiji Hantani
- 2A1110** Introduction to shared use of Thermal Analysers (Institute for Molecular Science) ○Haruyo Nagao
- 2B0855** Development of Carbon Dioxide Separation Materials Using Flexible Porous Coordination Polymers (iCeMS, Kyoto Univ.) ○Ken-ichi Otake
- 2B0920** Thermodynamic analysis of CO₂ adsorption process in flexible metal-organic frameworks (Kochi Univ. Tech.) ○Masataka Ohtani
- 2B0945** Analysis of CO₂ absorption/desorption mechanism of Li₃NaSiO₄ ceramics and its cyclic property (CHS, Nihon Univ.) Shumpei Iwasaki, Kosuke Shido, ○Takuya Hashimoto
- 2B1010** Measurement of cooling rate dependent thermal conductivity of dmit complex with quantum spin liquid ground state (A)Grad. Sch. Sci., Osaka Univ., (B)RIKEN) ○Luming Zhang^A, Tetsuya Nomoto^B, Yasuhiro Nakazawa^A, Reizo Kato^B
- 2B1030** Detection of Quantum Vortex Melting Transition via Single-Sensor Measurements of MCE and Heat Capacity (C_p) in Layered Superconductor κ -(BEDT-TTF)₂Cu(NCS)₂ (Grad. Sch. Sci., Osaka Univ.) ○Yu Zhang, Luming Zhang, Satoshi Yamashita, Hiroki Akutsu, Yasuhiro Nakazawa
- 2B1050** Investigation of the Heat Capacity Phase Transitions in θ -(BEDT-TTF)₂MM'(SCN)₄ Crystals (M=Rb,Cs and M'=Co,Zn) via Relaxation Calorimetry (Grad. Sch. Sci., Osaka Univ.) ○Vivian Arthurs, Haruhito Manabe, Satoshi Yamashita, Hiroki Akutsu, Yasuhiro Nakazawa
- 2B1110** Heat capacity measurement of RbMnFeCo Prussian blue under high pressure and baro-caloric effect (A)Tokyo Denki Univ., (B)ISSP, Univ. Tokyo, (C)Grad. Sch. Sci., Univ. Tokyo) ○Noriko Yamamuro^A, Haruto Senba^A, Osamu Yamamuro^B, Asuka Namai^C, Kenta Imoto^C, Marie Yoshikiyo^C, Shin-ichi Ohkoshi^C
- 2C0850** Effect of Atmospheric Water Vapor on the Thermal Decomposition Behavior of Nickel Hydroxide (Grad. Sch. Humanit. & Soc. Sic., Hiroshima Univ.) ○Kazuki Arima, Mito Hotta, Nobuyoshi Koga
- 2C0910** The effect of limiting step of lithium-recovery reaction with electrochemical pumping method by LiOH contractions (A)Hiroasaki Univ., (B)Chubu Electric Power, (C)Toyota Motor Corp.) ○Eiki Niwa^A, Kiyoto Shin-mura^A, Shigeki Kanda^B, Junichi Nishida^C, Tomohiro Yokoyama^C, Takeshi Abe^C, Kazuya Sasaki^A
- 2C0930** Comparison of the thermal dehydration of geopolymer pastes based on fly ash and blast furnace slag (A)Hiroshima Univ., (B)Waseda Univ., (C)JAEA) ○Manami Shindo^A, Aya Ueoku^B, Wakana Okamura^B, Shin Kikuchi^C, Atsushi Yamazaki^B, Nobuyoshi Koga^A
- 2C1000** Upgrading of Plastic Molding Simulation Using Fast Scanning Calorimetry (A)Mazda Motor Co., (B)Grad. Sch. Adv. Sci. Eng., Hiroshima Univ.) ○Shuhei Yasuda^{A,B}, Tsuguhisa Miyamoto^A, Ken Taguchi^B, Akihiko Toda^B

- 2C1020** Phase transition of polypropylene in foaming process
(TOYOBO Co., Ltd.) ○Koji Yamada
- 2C1040** Challenging in the thermal curing and mounting process of epoxy encapsulant for semiconductor package
(Sanyu Rec Co., Ltd.) ○Yuki Ishikawa, Tomoya Takao
- 2C1100** Development of High-Performance Nano-Alloy via Spinodal Decomposition
(Toray Industries) ○Sadayuki Kobayashi

A, B 11:30-12:00 C 11:20-12:00

Sponsor presentations

12:40-14:00

Poster presentations

- 2A1400** Detection of the superfluid transition in liquid helium by thermal diffusivity measurement using the temperature wave method
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIIST) ○Tadashi Kawamoto^A, Ryota Morioka^A, Shuji Kamegaki^A, Meguya Ryu^B, Junko Morikawa^A
- 2A1420** Observation of the magnetic Fréedericksz transition in the thermal diffusivity of nematic liquid crystal
(^AAIIST, ^BSch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^CCEMS, RIKEN) ○Meguya Ryu^A, Shuji Kamegaki^B, Fumito Araoka^C, Junko Morikawa^B
- 2A1440** Thin-film MEMS sensor fabrication for thermal diffusivity measurement of small samples and its application to liquid crystal phase transitions
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIIST) ○Shuji Kamegaki^A, Hiroshi Haraguchi^A, Meguya Ryu^B, Junko Morikawa^A
- 2A1500** Effect of Sample Size for Thermal Diffusivity Mapping by AFM-TWA
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIIST) ○Ryota Morioka^A, Meguya Ryu^B, Junko Morikawa^A
- 2A1520** Development of the Measurement System for the Response of α -Relaxation against Temperature Modulation in a Low Molecular Glass
(Kyoto Inst. Tech.) ○Kota Sato, Haruhiko Yao, Soichi Tatsumi
- 2A1540** Simultaneous determination of thermal properties using heater with large temperature coefficient of resistance
(Dept. Natural Sci., Tokyo Denki Univ.) ○Mitsuharu Nagasawa, Ryuunosuke Inoue, Takeshi Nakanishi
- 2A1600** Development of High-Sensitivity Temperature-Modulated DSC
(Kyoto Inst. Tech.) ○Yoshinobu Sumida, Nanako Ogura, Taro Tatsui, Soichi Tatsumi, Haruhiko Yao
- 2A1620** Study on making of chemical heat storage material which is made from industrial waste
(Akita Univ. Eng. Sci.) ○Fumito Kagaya, Noritoshi Saito, Yu Minamida
- 2B1400** Thermodynamic Tuning and Database Construction on New Energy Materials
(Guilin Univ. Elect. Tech.) ○Li-Xian Sun, Fen Xu
- 2B1430** Exploration of metastable perovskite-type transition metal oxides with computational approach and high-pressure synthesis
(Grad. Sch. Eng. Sci., Osaka Univ.) ○Shintaro Ishiwata
- 2B1500** Reversible structural and magnetic changes upon CH₃CN adsorption/desorption in molecular ionic crystals with supramolecular cation
(Res. Inst. Electr. Sci., Hokkaido Univ.) ○Kiyonori Takahashi
- 2B1520** Mechanical, magnetic, and electrical conduction properties of elastic crystals composed of π -conjugated molecules
(Nara Women's Univ.) ○Yoji Horii
- 2B1540** Effect of Particle Size on the Thermal Dehydration of Sodium Acetate Trihydrate
(Grad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Shunsuke Fukunaga, Mito Hotta, Nobuyoshi Koga
- 2B1600** Importance of heat capacities in the next generation thermodynamic database
(NIMS) ○Taichi Abe, Masao Morishita, Kiyomi Hirose, Yuki Ando
- 2B1620** Reaction Behavior between Sodium and Nitrate Molten Salt in Sodium-cooled Fast Reactor coupled to Thermal Energy Storage System
(JAEA) ○Rika Sato, Toshiki Kondo, Ryota Umeda, Shin Kikuchi, Hidemasa Yamano
- 2C1400** Analysis of binding equilibrium between cold shock protein and single-stranded nucleic acids at low concentrations using molecular beacons
(^ANagaoka Univ. Tech., ^BNatl. Inst. Tech., Oyama College, ^CInst. Protein Phys.) Iori Koga^A, Yuuki Katoh^A,

- Tomonori Saotome^{A,B}, ○Shun-ichi Kidokoro^{A,C}
- 2C1425** Design of mutant enzyme to improve its thermostability by using molecular dynamics simulations
(Bio-Pharma Res. Lab., Kaneka Co.) ○Kanji Oshima
- 2C1450** Study of thermodynamic properties of molecular interaction involving nucleic acids to improve nucleic acid medicine
(Fac. Sci., Tokyo Univ. Sci.) ○Hidetaka Torigoe
- 2C1515** Development of physicochemical profiling method for nucleic acid drugs
(NIMS, Univ. Tsukuba) ○Kohsaku Kawakami
- 2C1540** DSC Measurement and a Prediction Model Construction for T_m -value of Nucleic Acid Medicines
(^ANIBIOHN, ^BMitsubishi Tanabe Pharma Corp., ^CGrad. Sch. Pharm. Sci., Osaka Univ., ^DMalvern Panalytical, Spectris, ^EKyoto Pref. Univ., ^FIPR, Osaka Univ.) ○Masataka Kuroda^{A,B}, Yuuya Kasahara^{A,C}, Masako Hirose^D, Harumi Yamaguma^A, Masayuki Oda^E, Chioko Nagao^F, Kenji Mizuguchi^{A,F}
- 2C1605** Thermal stability of adeno-associated virus vector for gene therapy
(^AGrad. Sch. Eng., Osaka Univ., ^BU-Medico Inc.) ○Susumu Uchiyama^A, Yuki Yamaguchi^A, Saki Shimojo^A, Tomohiko Ikeda^A, Tetsuo Torisu^A, Mitsuko Fukuhara^B, Yasuo Tsunaka^A

Poster Session

- P2-01*** Development of microbial calorimetry for shaking incubator
(^AFac. Biores., Mie Univ., ^BGrad. Sch. Biores., Mie Univ.) ○Riko Kasahara^A, Iori Mukaihata^A, Hideo Miyake^B
- P2-02** Simultaneously determine thermal properties for sample with short internal relaxation times
(Dept. Natural Sci., Tokyo Denki Univ.) ○Ryuunosuke Inoue, Mitsuharu Nagasawa, Takeshi Nakanishi
- P2-03** Heat Capacity from Phonon Calculation with Machine-Learned Force Fields
(MSL, Tokyo Inst. Tech.) ○Suguru Kitani, Hitoshi Kawaji
- P2-04** Using heat pulses to measure flow rate in the stem of the homeothermic plant, skunk cabbage, *Symplocarpus renifolius*
(Iwate Univ.) ○Hiroyuki Suzuki, Tomoki Ide, Masahiro Daibo, Kenji Miura, Takami Abe, Hiroshi Osada
- P2-05*** Structural and orientation analysis of crystalline thin films formed by self-assembly of single-molecule magnets
(Nara Women's Univ.) ○Miki Yamada, Akane Mizoguchi, Yoji Horii, Takashi Kajiwara
- P2-06*** Magnetic properties and heat capacity of high-quality single crystals of deuterated organic superconductor κ -(d8-BEDT-TTF)₂Cu(NCS)₂
(^AGrad. Sch. Sci., Osaka Univ., ^BGrad. Sch. Sci. Tech., Saitama Univ.) ○Ryuju Ikei^A, Taiki Maeda^A, Satoshi Yamashita^A, Hiroki Akutsu^A, Hiromi Taniguchi^B, Yasuhiro Nakazawa^A
- P2-07*** Syntheses, structures, and magnetization relaxation behavior of lanthanide complexes constructed with a decadentate cage-type ligand
(Nara Women's Univ.) ○Saho Tamayose, Yuki Nakamura, Ayaka Horii, Yoji Horii, Takashi Kajiwara
- P2-08*** Heat capacity measurement of dimer Mott type organic charge-transfer complex
(Grad. Sch. Sci., Osaka Univ.) ○Takato Masuta, Zhang Luming, Satoshi Yamashita, Hiroki Akutsu, Yasuhiro Nakazawa
- P2-09*** Investigation of the effect of aggregation on the slow magnetization relaxation of mononuclear Gd(III) complexes
(Nara Women's Univ.) ○Minoru Maeda, Fumika Murai, Mone Kamioka, Saki Nakanishi, Yoji Horii, Takashi Kajiwara
- P2-10*** Third harmonic response and temperature rising effect of Gd-doped Mn-Zn ferrite under AC magnetic field
(Grad. Sch. Eng. Sci., Yokohama Natl. Univ.) ○Yuu Kusumoto, Ryota Iijima, Ryota Abe, Hiroki Amano, Marimo Hasegawa, Shotaro Watanabe, Yuko Ichiiyanagi
- P2-11** Requirement for the realization of the Charge Glass state in θ -(BEDT-TTF)₂X
(Grad. Sch. Sci., Osaka Univ.) ○Satoshi Yamashita, Yasuhiro Nakazawa
- P2-12*** Thermodynamic study of the clathrate phase of aqueous 1,2-butanediol solutions
(Grad. Sch. Eng., Kokushikan Univ.) ○Manato Nishimura, Atsushi Nagoe
- P2-13*** Novel Thermally Driven Dynamics in Chiral Liquid Crystals
(Waseda Univ.) ○Shunsuke Takano, Takuya Nakanishi, Kenta Nakagawa, Toru Asahi
- P2-14** Rate constant estimation method for liquid-phase reactions using quantum chemistry calculations combined with a continuous dielectric model
(Grad. Sch. Environ. Inf. Sci., Yokohama Natl. Univ.) ○Yu-ichiro Izato
- P2-15** Freezing Temperature of Aqueous Polymer Solutions at Varying Concentrations and Cooling Rates, and Ice Structure as Affected by Polymer Motion
(^AGrad. Sch. Sci. Tokai Univ., ^BFac. Sci., Tokai Univ., ^CMicro/Nano Tech., Tokai Univ.) ○Yuka Arai^A, Kaito Sasaki^{B,C}, Rio Kita^{B,C}, Naoki Shinyashiki^{B,C}
- P2-16** Thermal behavior of porphyrin derivative H₂TCPPOC₁₅H₃₁

- (^AGrad. Sch. Integrated Basic Sci., Nihon Univ., ^BNara Women's Univ.) ○Syunya Kaminaga^A, Mariko Noguchi^A, Yoji Horii^B, Hiroki Fujimori^A
- P2-17*** Kinetic behavior of thermal dehydration of copper (II) sulfate pentahydrate in dry and wet atmospheres (Grad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Mito Hotta, Nobuyoshi Koga
- P2-18*** Relationship between electrical conduction/thermal expansion properties and structural phase transition of SrFeO_{3-δ} with controlled oxygen content (^ANihon Univ., ^BUniv. Tokyo) ○Taizo Yoshino^A, Takayuki Sugimoto^A, Kosuke Shido^A, Takuya Hashimoto^A, Motoyuki Matsuo^B
- P2-19*** Crystal structure and phase transition behavior of partially cation substituted SrFeO_{3-δ} (^ANihon Univ., ^BUniv. Tokyo, ^CTohoku Univ.) ○Keina Nagai^A, Ginga Yamada^A, Hikaru Murakami^A, Chihiro Kato^A, Taizo Yoshino^A, Haoxuan Lyu^A, Ryutarō Maehara^A, Shumpei Nimura^A, Kosuke Shido^A, Takuya Hashimoto^A, Motoyuki Matsuo^B, Daisuke Morikawa^C, Kenji Tsuda^C
- P2-20*** Kinetics of the Thermal Dehydration of Copper(II) Chloride Dihydrate (^AFac. Educ., Hiroshima Univ., ^BGrad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Kiyoto Tsuji^A, Mito Hotta^B, Nobuyoshi Koga^B
- P2-21** Measurement of specific heat capacity of SiO₂ by differential scanning calorimeter and observation of the structural phase transition (AIST) ○Haruka Abe
- P2-22*** Study of cyclodextrin-protein interaction by titration calorimetry (Fac. Sci. Eng., Kindai Univ.) ○Chisa Yoshida, Tadashi Kamiyama
- P2-23*** Contribution of a disulfide bond in H-CDR3 loop of antibody for antigen binding and stability (Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.) ○Mutsumi Yoshida, Masayuki Oda
- P2-24*** Effect of cyclodextrin on acidic and thermal denaturation of protein (Fac. Sci. Tech., Kindai Univ.) ○Takumi Miyamoto, Soya Waida, Tadashi Kamiyama
- P2-25*** Thermodynamic analysis of trade-off between the binding affinity and stability of antibodies (Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.) ○Saaya Yabuno, Masayuki Oda
- P2-26*** Interaction analysis of medaka prostaglandin binding protein with riboflavin (^AFac. Sci. Eng., Kindai Univ., ^BFac. Agri., Kindai Univ.) ○Kazuki Mitani^A, Koichi Uegaki^B, Shigeru Shimamoto^A
- P2-27** Enhanced Thermal Stability of Hinokitiol through Inclusion Complex Formation with Modified β-Cyclodextrins (Fac. Pharm., Fukuoka Univ.) ○Tomonori Ohata, Izumi Kaku, Hiroyuki Tsutsumi, Rie Nakashima, Hirohito Ikeda
- P2-28** Calorimetric analysis of chitin utilization activity of *Aeromonas salmonicida* (Grad Sch. Agri., Niigata Univ.) Kosuke Okada, Motochika Hamada, Kazushi Suzuki, ○Hayuki Sugimoto
- P2-29** Identification of binding sites of clinical drugs on HSA molecule by using isothermal titration calorimetry (Fac. Pharm., Chiba Inst. Sci.) ○Hiroyasu Ohtaka, Haruki Masuda, Yumi Sugawara, Yuki Akiyama
- P2-30*** Kinetic behavior of the thermal decomposition of potato starch (^AFac. Educ., Hiroshima Univ., ^BGrad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Reiko Uehara^A, Manami Shindo^B, Takamasa Hashimoto^B, Nobuyoshi Koga^B
- P2-31*** Analysis of the CO₂ adsorption mechanism in flexible metal-organic frameworks based on calorimetric measurements (Kochi Univ. Tech.) ○Shino Kannaka, Kosuke Kakiuchi, Masataka Ohtani
- P2-32*** Phase behavior and cold crystallization in Schiff base liquid crystal compounds, 2OBAA and 4OBAA, and their binary mixtures (^AGrad. Sch. Sci. Tech., Univ. Tsukuba, ^BCCS, Univ. Tsukuba, ^COsaka Univ.) ○Suzu Kaneko^A, Yasuhisa Yamamura^A, Kazuya Saito^{B,C}
- P2-33** Curing behavior of thermoset epoxy-imidazole system (^AToray Res. Center Inc., ^BSanyu Rec Co., Ltd.) ○Yoshitomo Furushima^A, Takayuki Hirano^A, Hirofumi Torigoe^B, Kei Manabe^B, Tomoya Takao^B, Yuki Ishikawa^B
- P2-34** Phase behavior of liquid crystals nCFPB ($n = 6-9$) (Grad. Sch. Sci. Eng., Kindai Univ.) ○Chihiro Inoki, Hal Suzuki
- P2-35** Dependence of the heat capacity of poly(N-vinylpyrrolidone) and polyvinyl alcohol on water content (^AToray Res. Center Inc., ^BGrad. Sch. Sci., Osaka Univ.) ○Keisuke Kondo^A, Yoshitomo Furushima^A, Naoki Man^A, Kazuhiko Ishikiriyama^A, Eri Nishiyama^B, Yuto Sasada^B, Yuji Miyazaki^B, Motohiro Nakano^B, Yasuhiro Nakazawa^B
- P2-36** Crystalline polymorphs and local thermophysical properties measurement of pharmaceutical raw materials in thermal process (^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIST, ^CImperial College London) ○Ryoga Yamazaki^A, Meguya Ryu^B, Sergei Kazarian^C, Junko Morikawa^A

- P2-37** Heat capacity change for polyisobutylene in the glass transition phenomenon and the flow region measured by TMDSC
(Grad. Sch. Eng., Chiba Inst. Tech.) ○Ryoto Suzuki, Itaru Tsukushi
- P2-38** Kinetic behavior on the thermal imidization of PMDA/ODA polyamic acid nano particles
(^ADept. Appl. Chem., Natl. Def. Acad. Jpn, ^BGrad. Sch. Humanit. Soc. Sci., Hiroshima Univ.) ○Hiroto Sinkyu^A, Shuto Yamada^A, Masahiro Tsuchiya^A, Nobuyoshi Koga^B
- P2-39** Prediction of temperature dependence of heat capacity of polymers by machine learning
(Toray Res. Center, Inc.) ○Kazuhiko Ishikiriya
- P2-40*** Thermal stability analysis of ammonia borane/1-butyl-3-methylimidazolium chloride as a hydrogen carrier based on thermal analyses
(Grad. Sch. Environ. Inf. Sci., Yokohama Natl. Univ.) ○Yuta Nakamura, Atsumi Miyake, Yu-ichiro Izato
- P2-41** Experimental and Numerical Analysis of Heat Transfer in Chemical Heat Storage Materials within a Microwave Cavity Reactor
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BIGSES, Kyushu Univ., ^CZeroC) ○Massimiliano Zamengo^A, Hisahiro Einaga^B, Yuji Wada^C, Junko Morikawa^A
- P2-42** Calorimetric Study of Bio-cokes from Buckwheat Husks Using a Microcalorimeter
(Kindai Univ. Tech. College) ○Takashi Suzuki
- P2-43** Analysis of the effects of nitrate additives on the carbonization behavior of lignin
(Fukuoka Univ.) ○Momoko Sugiyama, Kento Shiota, Eiko Higashi, Katsumi Katoh, Takafumi Kato

September 28, 2024

- 3A0850** Calorimetric and neutron scattering studies on amorphous methane hydrates
(^AISSP, Univ. Tokyo, ^BIMSS KEK, ^CCROSS) ○Menghan Zhang^A, Hiroshi Akiba^A, Takashi Honda^B, Kazutaka Ikeda^C, Osamu Yamamuro^A
- 3A0910** Kinetic behavior of hydration of sodium carbonate
(Grad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Mito Hotta, Nobuyoshi Koga
- 3A0930** Kinetic behavior of thermal decomposition of α -Cyclodextrin
(Grad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Takamasa Hashimoto, Nobuyoshi Koga
- 3A0950** Relevance between amorphous properties and nucleation behavior found for crystallization process of ibuprofen glass
(NIMS, Univ. Tsukuba) ○Kohsaku Kawakami
- 3A1010** Heat Capacity and Melting Behavior of Stretched Polyisoprene Rubber
(Fac. Sci. Eng., Kindai Univ.) ○Hal Suzuki, Miyu Umeda, Yusuke Morisawa
- 3A1030** Density Functional Theory, Molecular Dynamic Simulations and Broadband Dielectric Spectroscopic Studies of an Electrolytic Polymer –Polyethylene Imine
(^AMicro/Nano Tech., Tokai Univ., ^BFac. Sci., Tokai Univ.) ○Kodakkat Parambil Safna Hussan^A, Shiori Inoue^B, Yuka Arai^B, Kaito Sasaki^{A,B}, Rio Kita^{A,B}, Takeru Ito^B, Naoki Shinyashiki^{A,B}
- 3A1050** Softening behavior of a porphyrin-based elastic crystal upon cooling
(Nara Women's Univ.) ○Hinako Kato, Yoji Horii, Takashi Kajiwara
- 3A1110** Heat capacity and entropy in Schiff base liquid crystal compounds, 2MBAC and 4MBAC, exhibiting some liquid crystal phases (N, SmA, HexB, CrB)
(^AGrad. Sch. Sci. Tech., Univ. Tsukuba, ^BCCS, Univ. Tsukuba, ^COsaka Univ.) ○Yasuhisa Yamamura^A, Izumi Akihiro^A, Kazuya Saito^{B,C}
- 3B0855** Application example under high-speed heating and cooling conditions using Flash DSC™
(Mettler-Toledo Int., Inc.) ○Takahiro Fujii
- 3B0925** Kinetics of crystallization and melting of polymers examined by chip sensor calorimetry
(Grad. Sch. Adv. Sci. Eng., Hiroshima Univ.) ○Akihiko Toda
- 3B0955** Thermal analysis of polymeric materials under micron scale and rapid temperature scanning
(Toray Res. Center, Inc.) ○Yoshitomo Furushima
- 3B1025** Development of the integrated sensing system for the measurement of local thermophysical properties
(AIST) ○Meguya Ryu
- 3B1055** Intracellular thermometry using carbon nanomaterials
(Kyoto Inst. Tech.) ○Shingo Sotoma
- 3C0855** Developing experimental skills of chemistry students in KOSEN
(Natl. Inst. Tech., Wakayama College) ○Makoto Nishimoto
- 3C0910** The basic science education for engineering development at National Institute of Technology
(Natl. Inst. Tech., Ube College) ○Shigeyoshi Nakamura
- 3C0925** Science Education and International Cooperation in National Institute of Technology (KOSEN) and University
(Natl. Inst. Tech., Oyama College) ○Tomonori Saotome
- 3C0940** Research and comparison of the chemical (science) literacy in the students who studied in liberal arts and science university on general education curriculum
(Dept. Commerce, Kumamoto Gakuen Univ.) ○Sekai Iwama
- 3C1005** Challenges for Science Education in Schools and Teacher Training and Citizen Science in the Future
(Naruto Univ. Education) ○Yukio Terashima
- 3C1020** Delivery Experiment for Fostering Scienceholistic Students
(Kindai Univ.) ○Takayoshi Kimura
- 3C1035** A Report on the Practice of Teaching Thermal Science from the Perspective of Secondary Education Science and its Issues
(Hagoromo Gakuen Junior & Senior High School) ○Takahiro Kotake
- 3C1050** Lessons on Enthalpy in High School Chemistry and Student Experiments: In Response to the Revision of the National Curriculum Guidelines
(Kyoto Pref. Rakuohku High School) ○Tomoki Sakaguchi

12:10-13:30

Poster presentations

- 3A1330** Measurement of the appearance of thermal diffusivity anisotropy during dimer liquid crystal phase transition using TWA method
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIST) ○Daichi Aizawa^A, Meguya Ryu^B, Hidemine Furuya^A, Junko Morikawa^A
- 3A1350** Three-dimensional anisotropic thermal diffusivity measurements of micro-scale thin-sectioned polymer samples
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIST) ○Kohki Nomura^A, Ryota Morioka^A, Meguya Ryu^B, Junko Morikawa^A
- 3A1410** Thermal analysis of various highly heat-resistant polymers by Fast Scanning Calorimetry
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIST) ○Shiori Nakagawa^A, Hayato Maeda^A, Meguya Ryu^B, Teruaki Hayakawa^A, Junko Morikawa^A
- 3A1430** Higher-order structures and thermal diffusivity of polymers (3)
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIST, ^CKyoto Inst. Tech.) Koki Nomura^A, Shiori Nakagawa^A, Meguya Ryu^B, Satoru Hosoda^C, ○Junko Morikawa^A
- 3A1450** Kinetics of thermal and oxidative decomposition of PP assuming sequential reactions
(Toray Res. Center, Inc.) ○Tomohiro Ohkawa, Yoshitomo Furushima
- 3A1510** Impact of Curing Agent Content on Curing Behavior of Epoxy Resins via Temperature Modulated DSC Measurement
(DIC Corp.) ○Yuichi Satokawa, Mari Ohno, Jun-ichiro Koike
- 3A1530** Heat Capacity and Phase Behavior of Poly(*N*-vinylpyrrolidone)/Water Systems
(^AGrad. Sch. Sci., Osaka Univ., ^BToray Res. Center, Inc.) ○Eri Nishiyama, Yuto Sasada, Yuji Miyazaki, Motohiro Nakano, Yasuhiro Nakazawa, Keisuke Kondo, Yoshitomo Furushima, Naoki Man, Kazuhiko Ishikiriyama
- 3C1330** Thermal Properties in Vapor-deposited Ultrastable Phenolphthalein Glass
(Kyoto Inst. Tech.) ○Ibuki Furuno, Yuta Kishimoto, Arifumi Okada, Haruhiko Yao, Soichi Tatsumi
- 3C1350** Thermodynamical characterization of confined indomethacin in MCM-41 Pores
(Kyoto Inst. Tech.) Masamune Miyata, Haruhiko Yao, ○Soichi Tatsumi
- 3C1410** Polymer Molecular Weight Dependences of Glass Transition in Dimer-polymer Mixtures for α -methyl Styrene Systems
(Kyoto Inst. Tech.) ○Tomoyuki Yamaguchi, Genki Kikumoto, Kengo Minamimoto, Haruhiko Yao, Soichi Tatsumi
- 3C1430** Vapor-Liquid equilibrium of binary mixtures containing methylnonafluorobutylether + alcohol or alkane
(^AGrad Sch. Sci. Eng. Tokyo Denki Univ., ^BFac. Sci. Eng. Tokyo Denki Univ.) ○Erina Saito^A, Hideo Ogawa^B, Yuri Yamada^B, Fumio Kimura^B
- 3C1450** Low temperature heat capacities and inelastic neutron scattering of vapor-deposited simple molecular glasses (ISSP, Univ. Tokyo) ○Xuejun Wu, Hiroshi Akiba, Yoshinori Ohmasa, Osamu Yamamuro
- 3C1510** Heat capacity and quasielastic neutron scattering of acetonitrile absorbed in a metal-organic framework MIL-101
(^AISSP, Univ. Tokyo, ^BCROSS, ^CTokyo Univ. Sci.) ○Shun Sato^A, Hiroshi Akiba^A, Yoshinori Ohmasa^A, Takeshi Yamada^B, Kaori Taniguchi^C, Masaaki Sadakiyo^C, Osamu Yamamuro^A
- 3C1530** Identification of the various crystalline phases of OHMBBA by simultaneous measurements of DSC-XRD and DSC-Raman spectroscopy
(^ACollege Humanit. & Sci., Nihon Univ., ^BGrad. Sch. Integrated Basic Sci., Nihon Univ., ^CKokushikan Univ.) Ami Hayashi^A, Kosuke Shido^B, ○Mariko Noguchi^B, Atsushi Nagoe^C, Hiroki Fujimori^B

Poster Session

- P3-01*** Construction of an apparatus for measuring mechanocaloric effect of rubber equipped with temperature controller
(^AKindai Univ., ^BOsaka Univ.) ○Nanako Akiyama^A, Yusaku Suenaga^A, Takasuke Matsuo^B, Hal Suzuki^A
- P3-02** Prototyping and Process Optimization of Graphene-based Temperature Wave Sensor
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIST) ○Ryota Kato^A, Shuji Kamegaki^A, Hiroshi Haraguchi, Meguya Ryu^B, Junko Morikawa^A
- P3-03** Prototyping of Fast Scanning Calorimeter
(Kyoto Inst. Tech.) ○Kengo Yoshida, Soichi Tatsumi, Haruhiko Yao
- P3-04** Evolved Gas Analysis under Oxidizing Atmosphere by TG-FTIR and TG-SPME
(Rigaku^A, Thermo Fisher^B) ○Yoshinobu Hosoi^A, Mitsuo Hattori^B
- P3-05** Thermophysical property measurements of material surface using 3ω method

- (MSL, Tokyo Inst. Tech.) ○Taichi Tagawa, Noboru Takahashi, Suguru Kitani, Hitoshi Kawaji
- P3-06*** Spin crossover phenomena of [Mn^{III}(4-Br3taa)]
(Grad. Sch. Sci., Osaka Univ.) ○Hiroyasu Ishibashi, Motohiro Nakano, Yuji Miyazaki, Takamitsu Fukuda
- P3-07*** Water Dispersibility of Magnetite Nanoparticles and Heat Generation Mechanism through Magnetic Relaxation
(Grad. Sch. Eng. Sci., Yokohama Natl. Univ.) ○Shotaro Watanabe, Ryota Yano, Hiroki Amano, Ryota Abe, Yuu Kusumoto, Marimo Hasegawa, Yuko Ichiyanagi
- P3-08*** Construction and characterization of elastic crystals exhibiting electrical conductivity and magnetism
(^ANara Women's Univ., ^BNihon Univ.) ○Chiharu Watanabe^A, Yoji Horii^A, Mariko Noguchi^B, Takashi Kajiwara^A
- P3-09*** The physical property evaluation of cyanide-bridged complexes with ruthenium dimers as cationic units through magnetic and heat capacity measurements
(^AGrad. Sch. Sci., Osaka Univ., ^BUniv. Utah) ○Reika Nakajima^A, Satoshi Yamashita^A, Hiroki Akutsu^A, Yasuhiro Nakazawa^A, J.S. Miller^B
- P3-10*** The preparation and heat dissipation effect of MFe₂O₄ (M = Mn, Zn) nanoparticles
(Grad. Sch. Eng. Sci., Yokohama Natl. Univ.) ○Marimo Hasegawa, Hiroki Amano, Ryota Abe, Yuu Kusumoto, Shotaro Watanabe, Yuko Ichiyanagi
- P3-11*** Low-temperature heat capacity of the topological insulator material α-(BETS)₂I₃
(Grad. Sch. Sci., Osaka Univ.) ○Yoshiki Okamoto, Satoshi Yamashita, Hiroki Akutsu, Yasuhiro Nakazawa
- P3-12** Transport and Thermodynamic Properties of Spin Liquid Compounds with Carrier-doping
(^AGrad. Sch. Sci., Osaka Univ., ^BISSP, Univ. Tokyo, ^CVerkin Inst. Low Temp. Phys.) ○Yasuhiro Nakazawa^A, Emre Yesil^A, Luming Zhang^A, Satoshi Yamashita^A, Shusaku Imajo^B, A. Krivchikov^C, Hiroki Akutsu^A
- P3-13*** High-Pressure Phase Behavior of Acidic Phospholipid Dipalmitoylphosphatidic Acid Bilayer
(^AGrad. Sch. Sci. & Tech. Innov., Tokushima Univ., ^BGrad. Sch. Tech. Indus. & Soc. Sci., Tokushima Univ.) ○Sota Matsuoka^A, Kana Kajiuara^A, Masaki Goto^B, Nobutake Tamai^B, Hitoshi Matsuki^B
- P3-14*** The effect of molecular motion in crystallized fructose solutions on the ice structure
(^AGrad. Sch. Sci., Tokai Univ., ^BFac. Sci., Tokai Univ. ^CMicro/Nano Tech., Tokai Univ.) ○Shoma Higuchi^A, Kaito Sasaki^{B,C}, Rio Kita^{B,C}, Naoki Shinyashiki^{B,C}
- P3-15** Phase transition behavior of molecules adsorbed in an air stable organometallic complex MOF-808
(MSL, Tokyo Inst. Tech.) ○Gaku Tsuzuki, Suguru Kitani, Hitoshi Kawaji
- P3-16** Effect of hexadecanol on the phase behavior of a surfactant (CTAB) / water binary system
(Grad. Sch. Sci. Eng., Kindai Univ.) ○Kosei Yoshida, Hal Suzuki
- P3-17** Glass transition of aqueous sucrose solutions and those confined within mesoporous silicas
(Grad. Sch. Integrated Basic Sci., Nihon Univ.) ○Taiga Koyama, Mariko Noguchi, Hiroki Fujimori
- P3-18*** Physico-Geometrical Modeling of the Thermal Decomposition of Zinc Hydroxide
(^AFac. Educ., Hiroshima Univ., ^BGrad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Yuna Kodani^A, Kazuki Arima^B, Shunsuke Fukunaga^B, Mito Hotta^B, Nobuyoshi Koga^B
- P3-19*** Kinetic analysis of the oxidation of titanium carbide
(Grad. Sch. Environ. Inf. Sci., Yokohama Natl. Univ.) ○Yuta Yoshimitsu, Atsumi Miyake, Yu-ichiro Izato
- P3-20*** Phase transition properties of Na₂W_{1-x}MoxO₄ in terms of thermal energy storage materials
(Grad. Sch. Energy Sci., Kyoto Univ.) ○Fui Tsuchiya, Takeshi Yabutsuka, Shigeomi Takai
- P3-21*** Kinetic behavior of thermal decomposition of Ammonium Hydrogencarbonate
(^AFac. Educ., Hiroshima Univ., ^BGrad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Akane Tamano^A, Manami Shindo^B, Shunsuke Fukunaga^B, Mito Hotta^B, Nobuyoshi Koga^B
- P3-22** Tracing the formation mechanism of Ga-substituted materials in Al₂TiO₅
(Grad. Sch. Integrated Basic Sci., Nihon Univ.) ○Shin Kitagawa, Noguchi Mariko, Hiroki Fujimori
- P3-23** Thermal transport properties of metal-insulator transition material CuIr₂(S_{1-x}Se_x)₄
(MSL, Tokyo Inst. Tech.) ○Kenta Hashimoto, Suguru Kitani, Hitoshi Kawaji
- P3-24*** Structure-activity analysis of PET hydrolase activated by weak metal-ion binding
(Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.) ○Fumiya Kondo, Masayuki Oda
- P3-25*** Dependence of alkyl chain length of ionic liquids on the thermal stability of Cytochrome c
(Fac. Sci. Eng., Kindai Univ.) ○Soma Waida, Mari Noma, Tadashi Kamiyama
- P3-26*** Thermodynamics of α-helical peptides induced by metal-ion binding
(Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.) ○Shinya Nishatani, Masayuki Oda
- P3-27*** Interaction analysis of cane toad and Japanese gecko L-PGDS homologs with substrates using ITC
(^AFac. Sci. Eng., Kindai Univ., ^BFac. Agri., Kindai Univ., ^CFac. Pharm. Sci., Osaka Univ.) ○Chinatsu Noma^A, Koichi Uegaki^B, Kazuki Kawahara^C, Kodai Nakamoto^A, Yuji Hidaka^A, Shigeru Shimamoto^A
- P3-28** The Effect of Phospholipid Bilayer on Aβ Amyloid Fibril Formation
(^ACol. Life Sci., Ritsumeikan Univ., ^BGrad. Sch. Life Sci., Ritsumeikan Univ.) ○Toshiki Nakao^A, Atsurou Ito^B, Minoru Kato^{A,B}

- P3-29** Water Absorption and Desorption Isotherm and Relaxation Process During Desorption in Human Stratum Corneum
(^ANagoya Indust. Sci. Res. Inst. ^BDKSH MES Japan) ○Ichiro Hatta^A, Shinya Sakai^B
- P3-30** Insights into the allosteric regulation mechanism of α -isopropylmalate synthase in *Saccharomyces cerevisiae* using ITC
(^AGrad. Sch. Agri., Kindai Univ., ^BFac. Sci. Eng., Kindai Univ., ^CFac. Agri., Kindai Univ., ^DAIIST) ○Hana Kitazume^A, Kento Kizaki^A, Shigeru Shimamoto^B, Yuto Miura^C, Akimasa Tsuji^C, Hanane Nakamura^C, Yoko Akazawa^D, Takayuki Ohnuma^C, Atsushi Kurata^C, Koichi Uegaki^C
- P3-31*** Heat Capacity and Melting Behavior of Swollen Silicone Rubber
(Fac. Sci. Eng., Kindai Univ.) ○Ibuki Tanizawa, Tau Ikuno, Hal Suzuki
- P3-32*** Effect of Molecular Entanglement State of Ultrahigh-Molecular-Weight Polyethylene Melts on Crystallization and Melting Behavior
(^AGumma Univ., ^BTosoh Co.) ○Ayaka Takazawa^A, Masaki Kakiage^A, Hiroki Uehara^A, Takeshi Yamanobe^A, Takuya Ohnishi^B, Yasutake Wakabayashi^A
- P3-33*** Temperature-modulated DSC measurements for CO₂ adsorption process in flexible metal-organic frameworks (Kochi Univ. Tech.) ○Kosuke Kakiuchi, Shino Kannaka, Masataka Ohtani
- P3-34** Development of the high purity organic reference material of NMIJ CRM 4036-b Dibromochloromethane (NMIJ, AIST) ○Yoshitaka Shimizu, Xinnu Bao, Yuko Kitamaki, Nobuyasu Itoh
- P3-35** Study on the glass transition of biodegradable copolymer PHBH
(Kyoto Inst. Tech.) ○Ryosaku Azumi, Takaya Okazaki, Soichi Tatsumi, Haruhiko Yao
- P3-36** Melting temperature determination for mono-material each layer by polarized microscope observation DSC (Hitachi High-Tech Corp.) Ryokuhei Yamazaki, Shuta Nakagawa, ○Yuichi Kasai
- P3-37** Thermal fractionation of polyethylene by successive self-nucleation and annealing (SSA)
(Toray Res. Center, Inc.) ○Subaru Konishi, Yoshitomo Furushima, Masaaki Takeda
- P3-38** In situ thermal diffusivity measurements during the chain reaction process of chemically amplified resists
(^ASch. Mater. & Chem. Tech., Tokyo Inst. Tech., ^BAIIST, ^CImperial College London) ○Tomotake Naito^A, Meguya Ryu^B, Junko Morikawa^A
- P3-39** Kinetic analysis of liquid phase reaction of ammonium dinitramide, monomethylamine nitrate and acetamide mixtures
(^AFukuoka Univ., ^BUniv. Pardubice, ^CYokohama Natl. Univ., ^DJAXA) ○Kodai Deguchi^A, Kento Shiota^A, Stepan Jirman^B, Yu-ichiro Izato^C, Eiko Higashi^A, Katsumi Katoh^A, Hiroto Habu^D, Takafumi Kato^A
- P3-40** Thermal analysis of natural Amber and Jade
(Kanagawa Univ.) ○Sachi Miyamoto, Jiro Tanaka, Yuko Nishimoto
- P3-41*** Teaching materials of tracking the hardening process of cementitious materials by temperature measurement
(Grad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Manami Shindo, Nobuyoshi Koga
- P3-42*** Teaching Material for Measuring the Enthalpy of Fusion and Solidification of Sodium Acetate Trihydrate
(Grad. Sch. Humanit. & Soc. Sci., Hiroshima Univ.) ○Shunsuke Fukunaga, Nobuyoshi Koga
- P3-43** Reexamination of the freezing point depression experiment using the micro:bit thermometer
(Fac. Edu., Chiba Univ.) ○Hideko Hayashi, Ken-ichi Tozaki