

熱・エントロピー科学研究センター業績リスト(2023)
Publications from
the Research Center for Thermal and Entropic Science

[Articles are classified according to original paper (mark O), review article (R), book (B), translation (T) and miscellaneous (M). An asterisk attached to mark-letter indicates that the article has been published in Japanese.]

- O-1 Dynamics of Poly(3-hexylthiophene) Monolayers at Solution/Graphite Interfaces
D. Takajo, H. Katsuno, and K. Sudoh
ACS Macro Lett. **12**(2), 274–280 (2023).
- O-2 Structural Transformation and Magnetic Properties of Co(II) Coordination Polymers with Pyrazole-3,5-dicarboxylate and Pyrazine
F. Klongdee, Y. Sasada, M. Nakano, K. Kawamura, and J. Boonmak
Inorg. Chim. Acta **556**, 121645 (2023) (5 pages).
- O-3 Uniaxial Negative Thermal Expansion Induced by Molecular Rotation in a One-Dimensional Supramolecular Assembly with Associated Peculiar Magnetic Behavior
K. Takahashi, Y. Shirakawa, H. Sakai, I. Hisaki, S. Noro, T. Akutagawa, M. Nakano, and T. Nakamura
J. Mater. Chem. C **11**(5), 1891–1898 (2023).
- O-4 Construction of a Two-Dimensional Metal-Organic Framework with Perpendicular Magnetic Anisotropy Composed of Single-Molecule Magnets
I. Aratani, Y. Horii, D. Takajo, Y. Kotani, H. Osawa, and T. Kajiwara
J. Mater. Chem. C **11**(6), 2082–2088 (2023).
- O-5 Polymorphism and Thermodynamic Properties of 4-Cyano-3-fluorophenyl 4-Pentylbenzoate (5CFPB) Liquid Crystal
S. Enomoto, M. Umeda, T. Yamamoto, E. Juszyńska-Gałązka, Y. Miyazaki, and H. Suzuki
J. Therm. Anal. Cal. **148**(19), 10081–10092 (2023).
- O-6 Understanding the Emergence of the Boson Peak in Molecular Glasses
M. González-Jiménez, T. Barnard, B. A. Russell, N. V. Tukachev, U. Javornik, L.-A. H., A. J. Farrell, S. Guinane, H. M. Senn, A. J. Smith, M. Wilding, G. Mali, M. Nakano, Y. Miyazaki, P. McMillan, G. C. Sosso, and K. Wynne
Nat. Commum. **14**, 215 (2023) (11 pages).

- O-7 Synthesis, X-Ray Structures, and Magnetic Properties of Seven Polynuclear Cu(II) Complexes Containing Pyrazole-3,5-dicarboxylate with Various Ancillary Ligands
F. Klongdee, Y. Sasada, M. Nakano, K. Chainok, S. Youngme, and J. Boonmak
New J. Chem. **47**(20), 9669–9680 (2023).
- O-8 Heat Capacity of Poly(*N*-vinylpyrrolidone)
K. Ishikiriyama, K. Kondo, Y. Miyazaki, Y. Sasada, K. Sawada, R. Endo, N. Man, M. Nakano, and Y. Nakazawa
Thermochim. Acta **722**, 179456 (2023) (14 pages).
- O-9 Porous Mn²⁺ Magnet with a Pt-Cl Framework: Correlation between Water Vapor Adsorption/Desorption and Slow Magnetic Relaxation
H. Nakajima, K. Uchida, T. Yoshida, Y. Horii, T. Sato, Z. Luming, S. Yamashita, Y. Nakazawa, V. C. Agulto, M. Nakajima, B. K. Breedlove, M. Yamashita, H. Iguchi, and S. Takaishi
ChemPhysChem **24**(4), e202200618 (2023) (7 pages).
- O-10 Synthesis, Characterization, and Magnetic Properties of Iron(II) Complex with 2,6-Bis(pyrazol-3-yl)pyridine Ligand and Tetracyanonickelate Anion
F. Fitriani, I. Mulyani, D. Onggo, K. H. Sugiyarto, A. Bhattacharjee, H. Akutsu, and A. Santria
Indones. J. Chem. **23**(4), 1152–1160 (2023).
- O-11 Magnetoelectric, Spectroscopic, Optical and Elastic Properties of Co-Doped BaTiO₃ Ceramics
R. Bujakiewicz-Koronska, Ł. Gondek, L. Vasylechko, M. Balanda, E. Juszynska-Galazka, M. Galazka, D. Majda, W. Piekarczyk, A. Zywczyk, A. Cizman, M. Sitarz, P. Jelen, W. Salamon, P. Czaja, J. Jedryka, K. Koronski, A. Kalvane, K. Gornicka, E. Markiewicz, S. Yamashita, and Y. Nakazawa
J. Alloys Compounds **946**, 169344 (2023) (17 pages).
- O-12 Thermal Conductivity Measurement System for Molecules-Based Compounds Available in a Wide Temperature Region
L. Zhang, T. Nomoto, S. Yamashita, H. Akutsu, A. I. Krivchikov, and Y. Nakazawa
Low Temp. Phys. **49**(5), 539 (2023).
- O-13 Correlation-Driven Organic 3D Topological Insulator with Relativistic Fermions
T. Nomoto, S. Imajo, H. Akutsu, Y. Nakazawa, and Y. Kohama
Nat. Commun. **14**, 2130 (2023) (7 pages).

- O-14 Thermodynamic Properties of the Mott Insulator-Metal Transition in a Triangular Lattice System without Magnetic Order
E. Yesil, S. Imajo, S. Yamashita, H. Akutsu, Y. Saito, A. Pustogow, A. Kawamoto, and Y. Nakazawa
Phys. Rev. B **107**(4), 045133 (2023) (9 pages).
- O-15 Magnetic Field Induced Transition in the Charge-Glass Former θ -(BEDT-TTF)₂CsCo(SCN)₄
T. Nomoto, S. Yamashita, H. Akutsu, and Y. Nakazawa
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- O-16 Pseudogap Formation in Organic Superconductors
S. Imajo, T. Kobayashi, Y. Matsumura, T. Maeda, Y. Nakazawa, H. Taniguchi, and K. Kindo
Phys. Rev. Mater. **7**(12), 124803 (2023) (7 pages).
- O-17 Heme Pocket Structure and Its Functional Implications in an Ancestral Globin Protein
Y. Iritani, H. Ishikawa, M. Mizuno, and Y. Mizutani
Biochemistry **62**(18), 2727–2737 (2023).
- O-18 Protein Dynamics of a Light-Driven Na⁺ Pump Rhodopsin Probed Using a Tryptophan Residue near the Retinal Chromophore
A. Otomo, M. Mizuno, K. Inoue, H. Kandori, and Y. Mizutani
Biophys. Physicobiol. **20**(Suppl.), e201016 (2023) (12 pages).
- O-19 Chromophore Structure in an Inactive State of a Novel Photosensor Protein Opn5L1: Resonance Raman Evidence for the Formation of a Deprotonated Adduct at the 11th Carbon Atom
M. Mizuno, K. Sato, T. Yamashita, K. Sakai, Y. Imamoto, Y. Yamano, A. Wada, H. Ohuchi, Y. Shichida, and Y. Mizutani
J. Phys. Chem. B **127**(10), 2169–2176 (2023).
- O-20 Unique Vibrational Characteristics and Structures of the Photoexcited Retinal Chromophore in Ion-Pumping Rhodopsins
Z. Li, M. Mizuno, T. Ejiri, S. Hayashi, H. Kandori, and Y. Mizutani
J. Phys. Chem. B **127**(46), 9873–9886 (2023).
- O-21 Temperature Induced Nanostructure Formation Behavior of Core Cross-Linked Star-Shaped Poly(*N*-isopropylacrylamide) in Water
K. Terao, M. Abe, M. Nagase, S. Takeshima, S. Ida, and S. Kanaoka
Macromolecules **56**(14), 5635–5641 (2023).

- O-22 Molecular Conformation and Intermolecular Interactions of Linear and Cyclic Amylose Derivatives in Solution
K. Terao, A. Ryoki, S. Kitamura, and T. Sato
Macromol. Symp. **408**(1), 2200024 (2023) (7 pages).
- O-23 Complex Formation Behavior of Silica Nanoparticles and Xanthan
Y. Tomofuji and K. Terao
Macromol. Symp. **408**(1), 2200025 (2023) (6 pages).
- O-24 Correlation between Conformational Feature in Solution and Chiral Separation Ability of Linear and Nonlinear Amylose Tris(alkylcarbamate)s
A. Kishimoto, A. Ryoki, S. Kitamura, and K. Terao
Polymer **284**, 126303 (2023) (7 pages).
- O-25 Solution Characterization of a Hyperbranched Polysaccharide Carbamate Derivative and Specific Phase Separation Behavior Due to Chain Branching
M. Mizuguchi, K. Umeda, H. Mizumoto, and K. Terao
Soft Matter **19**(40), 7781–7786 (2023).
- R-1* 分子性電荷移動塩の超伝導ギャップの構造と対称性の熱力学的解析
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日本物理学会誌 **78**(2), 79-84 (2023).
- B-1* 新基礎化学実験法 2023
宮崎裕司(大阪大学化学教育研究会編, 執筆分担) A5, 144 頁
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- M-1* 巻頭言 50年の歴史と新しいページ
中澤康浩
熱測定 **50**(1), 1 (2023).
- M-2* 日本熱測定学会と「熱測定」の50周年にあたり
中澤康浩
熱測定 **50**(4), 120 (2023).