

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 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-3 Polymorphism and Thermodynamic Properties of 4-Cyano-3-fluorophenyl 4-Pentylbenzoate (5CFPB) Liquid Crystal
S. Enomoto, M. Umeda, T. Yamamoto, E. Juszyska-Gałązka, Y. Miyazaki, and H. Suzuki
J. Therm. Anal. Cal. **148**(19), 10081–10092 (2023).
- O-4 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. Commun. **14**, 215 (2023) (11 pages).
- O-5 Heat Capacity of Poly(*N*-vinylpyrrolidone)
K. Ishikiriya, 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-6 Porous Mn^{2+} 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-7 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-8 Magnetoelectric, Spectroscopic, Optical and Elastic Properties of Co-Doped BaTiO_3 Ceramics
R. Bujakiewicz-Koronska, Ł. Gondek, L. Vasylechko, M. Balanda, E. Juszynska-Galazka, M. Galazka, D. Majda, W. Piekarczyk, A. Zywczyak, 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-9 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-10 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-11 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-12 Magnetic Field Induced Transition in the Charge-Glass Former θ -(BEDT-TTF) $_2$ CsCo(SCN) $_4$
T. Nomoto, S. Yamashita, H. Akutsu, and Y. Nakazawa
Phys. Rev. B **107**(8), 085121 (2023) (8 pages).

- O-13 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-14 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-15 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-16 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
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- O-17 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-18 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-19 Complex Formation Behavior of Silica Nanoparticles and Xanthan
Y. Tomofuji and K. Terao
Macromol. Symp. **408**(1), 2200025 (2023) (6 pages).
- O-20 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-21 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
今城周作, 中澤康浩
日本物理学会誌 **78**(2), 79-84 (2023).
- R-2 Molecular Conformation and Intermolecular Interactions of Linear and Cyclic Amylose Derivatives in Solution
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- B-1* 新基礎化学実験法 2023
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学術図書出版社(2023 年 2 月 10 日発行).
- M-1* イオンや分子を内包したフラーレンの熱力学的性質
宮崎裕司, 中野元裕
大阪大学低温センター研究報告書(令和 4 年度) (2023) 印刷中.
- M-2* スピン液体物質における三角格子異方性による熱力学的特徴への影響
山下智史, 坪 広樹, 中澤康浩
大阪大学低温センター研究報告書(令和 4 年度) (2023) 印刷中.
- M-3* 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-4* 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).