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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 Simultaneous Spin-Crossover Transition and Conductivity Switching in a Dinuclear Iron(II) Coordination Compound Based on 7,7',8,8'-Tetracyano-*p*-quinodimethane
R. Ishikawa, S. Ueno, S. Nifuku, Y. Horii, H. Iguchi, Y. Miyazaki, M. Nakano, S. Hayami, S. Kumagai, K. Katoh, Z.-Y. Li, M. Yamashita, and S. Kawata
Chem. Eur. J. **26**(6), 1278–1285 (2020).
- O-2 Coexistence of Spin-Lattice Relaxation and Phonon-Bottleneck Processes in Gd(III)-phthalocyaninato Triple-Decker Complexes under Highly Diluted Conditions
Y. Horii, K. Katoh, Y. Miyazaki, M. Damjanović, T. Sato, L. Ungur, L. F. Chibotaru, B. K. Breedlove, M. Nakano, W. Wernsdorfer, and M. Yamashita
Chem. Eur. J. **26**(36), 8076–8082 (2020).
- O-3 Large-Amplitude Thermal Vibration-Coupled Valence Tautomeric Transition Observed in a Conductive One-Dimensional Rhodium–Dioxolene Complex
M. Mitsumi, Y. Komatsu, M. Hashimoto, K. Toriumi, Y. Kitagawa, Y. Miyazaki, H. Akutsu, and H. Akashi
Chem. Eur. J. (2020) in press.
- O-4 Generation of Sintered Fault Rock and its Implications for Earthquake Energetics and Fault Healing
T. Hirono, S. Kaneki, T. Ishikawa, J. Kameda, N. Tonoike, A. Ito, and Y. Miyazaki
Commun. Earth Env. **1**, 3 (2020) (8 pages).
- O-5 Solid-State Spin Equilibrium of Ni(cyclam)₂ Complex: Magnetostructural Correlations in Two Polymorphs
Y. Horii, Y. Kanegae, K. Takahashi, A. Fuyuhiko, M. Noguchi, H. Suzuki, and M. Nakano
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- O-6 Quenching and Restoration of Orbital Angular Momentum through a Dynamic Bond in a Cobalt(II) Complex

S.-Q. Su, S.-Q. Wu, M. L. Baker, P. Bencok, N. Azuma, Y. Miyazaki, M. Nakano, S. Kang, Y. Shiota, K. Yoshizawa, S. Kanegawa, and O. Sato
J. Am. Chem. Soc. **142**(26), 11434–11441 (2020).

- O-7 Single-Crystal-to-Single-Crystal Installation of $\text{Ln}_4(\text{OH})_4$ Cubanes in an Anionic Metallosupramolecular Framework
N. Yoshinari, N. Meundaeng, H. Tabe, Y. Yamada, S. Yamashita, Y. Nakazawa, and T. Konno
Angew. Chem. Int. Ed. **59**(41), 18048–18053 (2020).
- O-8 Chiral Molecular Conductor with an Insulator-Metal Transition Close to Room Temperature
J. I. Short, T. J. Blundell, S. J. Krivickas, S. Yang, D. J. Wallis, H. Akutsu, Y. Nakazawa, and L. Martin
Chem. Comm. **56**(66), 9497–9500 (2020).
- O-9 Structure and Properties of a New Purely Organic Magnetic Conductor, δ' -(BEDT-TTF) $_2$ (PO-CONHCH(cyclopropyl)SO $_3$) $\cdot$ 1.7H $_2$ O
H. Akutsu, A. Kohno, S. S. Turner, and Y. Nakazawa
Chem. Lett. **49**(11), 1345–1348 (2020).
- O-10 Structures and Properties of New Organic Conductors: BEDT-TTF, BEST and BETS Salts of the HOC $_2$ H $_4$ SO $_3^-$ Anion
H. Akutsu, Y. Koyama, S. S. Turner, K. Furuta, and Y. Nakazawa
Crystals **10**(9), 775 (2020) (13 pages).
- O-11 Single Crystal Heat Capacity Measurement of Charge Glass Compound θ -(BEDT-TTF) $_2$ CsZn(SCN) $_4$ Performed under Current and Voltage Application
K. Hino, T. Nomoto, S. Yamashita, and Y. Nakazawa
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- O-12 Variation of Electronic Heat Capacity of κ -(BEDT-TTF) $_2$ Cu[N(CN) $_2$]Br Induced by Partial Substitution of Donor Layers
E. Yesil, S. Imajo, T. Nomoto, S. Yamashita, H. Akutsu, and Y. Nakazawa
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- O-13 Different Electronic States of Isomorphous Chiral vs. Racemic Organic Conducting Salts, β'' -(BEDT-TTF) $_2$ (S- and *rac*-PROXYL-CONHCH $_2$ SO $_3$)
H. Akutsu, A. Kohno, S. S. Turner, S. Yamashita, and Y. Nakazawa
Mater. Adv. **1**(9), 3171–3175 (2020).

- O-14 Thermodynamic Properties of Glassy Phonon States Induced by Strong Electron Correlations in θ -Type Organic Charge Transfer Salts
T. Nomoto, E. Yesil, S. Yamashita, H. Akutsu, and Y. Nakazawa
Mod. Phys. Lett. B **34**(19&20), 2040059 (2020) (7 pages).
- O-15 Development of Frequency Tuning AC Modulation Method for High-Pressure Heat Capacity Measurements of Molecules-Based Compounds
T. Nomoto, T. Maruyama, S. Yamashita, H. Akutsu, and Y. Nakazawa
Mod. Phys. Lett. B **34**(19&20), 2040062 (2020) (8 pages).
- O-16 Anisotropic Fully Gapped Superconductivity Possibly Mediated by Charge Fluctuations in a Nondimeric Organic Complex
S. Imajo, H. Akutsu, R. Kurihara, T. Yajima, Y. Kohama, M. Tokunaga, K. Kindo, and Y. Nakazawa
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- O-17 Electric Dipole Induced Bulk Ferromagnetism in Dimer Mott Molecular Compounds
R. Yoshimoto, S. Yamashita, H. Akutsu, Y. Nakazawa, T. Kusamoto, Y. Oshima, T. Nakano, H. M. Yamamoto, and R. Kato
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- O-18 PEGylation of Co-Zn Ferrite Nanoparticles for Theranostics
A. Oshima, K. Kanda, K. Fujiwara, T. Ide, M. Takano-Kasuya, and Y. Ichiyanagi
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- O-19 Allosteric Communication with the Retinal Chromophore upon Ion Binding in a Light-Driven Sodium Ion-Pumping Rhodopsin
A. Otomo, M. Mizuno, K. Inoue, H. Kandori, and Y. Mizutani
Biochemistry **59**(4), 520–529 (2020).
- O-20 Nonbonded Atomic Contacts Drive Ultrafast Helix Motions in Myoglobin
S. Tahara, M. Mizuno, and Y. Mizutani
J. Phys. Chem. B **124**(26), 5407–5414 (2020).
- O-21 A Temperature Responsive Polysaccharide Derivative in Aqueous Solution: Amylose Ethyl Carbamates
S. Kimura, R. Kochi, S. Kitamura, and K. Terao
ACS Appl. Polym. Mater. **2**(6) 2426–2433 (2020).
- R-1 Role of Atomic Contacts in Vibrational Energy Transfer in Myoglobin

M. Mizuno and Y. Mizutani
Biophys. Rev. **12**(2), 511–518 (2020).

- B-1* 熱量測定・熱分析ハンドブック 第3版
宮崎裕司(日本熱測定学会編, 執筆分担)B5, 363 頁
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- B-5* 熱量測定・熱分析ハンドブック 第3版
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丸善(2020年8月30日発行).
- B-6 化学便覧 基礎編 改訂6版
中澤康浩(日本化学会編, 執筆分担)B5, 1536 頁
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- B-7 Magnetic Nanoparticles and Alternating Magnetic Field for Cancer Therapy
H. Mekar, Y. Ichiyanagi, and F. Tamanoi, In *Cell-Inspired Materials and Engineering (Fundamental Biomedical Technologies)*, D. O. Herausgegeben von Wang and D. Packwood, Eds.
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- B-8 Chapter 16 – Dynamics and Allostery of Human Hemoglobin as Elucidated by Time-Resolved Resonance Raman Spectroscopy
Y. Mizutani, In *Vibrational Spectroscopy in Protein Research*, Y. Ozaki, I. Lednev, M. Baranska, and B. Wood, Eds.
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- B-9* 機器分析ハンドブック 1 有機・分光分析編

第 6 章 ラマン分光法

水谷泰久(執筆分担) A5, 212 頁

化学同人(2020 年 4 月 22 日発行).

- M-1* 一次元水素結合ネットワーク型ロジウム(II)–セミキノ錯体の熱容量と相転移
宮崎裕司, 中野元裕
低温センター研究報告書(平成 30 年度)39–44 (2020).
- M-2* 水素結合によって一次元鎖を形成する単核銅(II)錯体
[Cu(fluorobenzoate)₂(pyridine)₂(H₂O)]の熱容量と相転移
宮崎裕司, 中野元裕
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- M-3* 分子性化合物単結晶の熱伝導度測定
野本哲也, A. I. Krivchikov, 山下智史, 坪 広樹, 中澤康浩
低温センター研究報告書(平成 30 年度)22–27 (2020).
- M-4* 分極有機伝導体
坪 広樹
低温センター研究報告書(令和元年度)(2020) 印刷中.
- M-5* 非磁性 Zn ドープによるフェライトナノ微粒子の MR 特性向上とハイパーサーミア効果
神田康平, 臼井章仁, 細貝良行, 井手太星, 藤原康暉, 大嶋晃人, 一柳優子
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