

## 技術推進部及び安全衛生管理室

### B-1) 学術論文

**M. MIYAJIMA, F. ASTUTI, T. FUKUDA, M. KODANI, S. IIDA, S. ASAI, A. MATSUO, T. MASUDA, K. KINDO, T. HASEGAWA, T. C. KOBAYASHI, T. NAKANO, I. WATANABE and T. KAMBE**, “Spin-Gap Formation due to Spin-Peierls Instability in  $\pi$ -Orbital-Ordered  $\text{NaO}_2$ ,” *Phys. Rev. B* **104**, L140402 (5 pages) (2021).

**J. KESKINEN, K. JANKALA, S.-M. HUTTULA, T. KANEYASU, Y. HIKOSAKA, E. SHIGEMASA, H. IWAYAMA, K. SOEJIMA, K. ITO, L. ANDRIC, M. A. KHALAL, J. PALAUDOUX, F. PENENT and P. LABLANQUIE**, “Auger Decay of the 3d Hole in the Isoelectronic Series of Br,  $\text{Kr}^+$ , and  $\text{Rb}^{2+}$ ,” *Phys. Rev. A* **103**, 032828 (8 pages) (2021).

**S. MAKITA, H. MATSUDA, Y. OKANO, T. YANO, E. NAKAMURA, Y. HASEGAWA, S. KERA, S. SUGA and F. MATSUI**, “Contrast Inversion of Photoelectron Spectro-Microscopy Image,” *e-J. Surf. Sci. Nanotechnol.* **19**, 42–47 (2021).

**F. MATSUI, S. MAKITA, H. MATSUDA, E. NAKAMURA, Y. OKANO, T. YANO, S. KERA and S. SUGA**, “Valence Band Dispersion Embedded in Resonant Auger Electrons,” *J. Phys. Soc. Jpn.* **90**, 124710 (9 pages) (2021).

**M. ITO, Y. TAKANO, Y. KEBUKAWA, T. OHIGASHI, M. MATSUOKA, K. KIRYU, M. UESUGI, T. NAKAMURA, H. YUZAWA, K. YAMADA, H. NARAOKA, T. YADA, M. ABE, M. HAYAKAWA, T. SAIKI and S. TACHIBANA**, “Assessing the Debris Generated by the Small Carry-On Impactor Operated from the Hayabusa2 Mission,” *Geochem. J.* **55**, 223–239 (2021).

**G. MICHALOUDI, J. J. LIN, H. YUZAWA, M. NAGASAKA, M. HUTTULA, N. KOSUGI, T. KURTÉN, M. PATANEN and N. L. PRISLE**, “Aqueous-Phase Behavior of Glyoxal and Methylglyoxal Observed with Carbon and Oxygen K-Edge X-Ray Absorption Spectroscopy,” *Atmos. Chem. Phys.* **21**, 2881–2894 (2021).

**G. GERMER, T. OHIGASHI, H. YUZAWA, N. KOSUGI, R. FLESCHE, F. RANCAN, A. VOGT and E. RÜHL**, “Improved Skin Permeability after Topical Treatment with Serine Protease: Probing the Penetration of Rapamycin by Scanning Transmission X-Ray Microscopy,” *ACS Omega* **6**, 12213–12222 (2021).

**D. CÉOLIN, H. YUZAWA, T. SAISOPA, K. KLAIPHET, J. BORSUP, P. SONGSIRIRITTHIGUL and N. KOSUGI**, “Substituent Effects in Aqueous Solutions of Carboxylate Salts Studied by X-Ray Absorption Spectroscopy at the Oxygen K-Edge,” *J. Chem. Phys.* **155**, 014306 (6 pages) (2021).

**A. FERTÉ, F. PENENT, J. PALAUDOUX, H. IWAYAMA, E. SHIGEMASA, Y. HIKOSAKA, K. SOEJIMA, P. LABLANQUIE, R. TAÏEB and S. CARNIATO**, “Specific Chemical Bond Relaxation Unraveled by Analysis of Shake-Up Satellites in the Oxygen Single Site Double Core Hole Spectrum of  $\text{CO}_2$ ,” *Phys. Chem. Chem. Phys.* **24**, 1131–1146 (2022).

### B-5) 特許出願

特許第 6954530 号 (P6954530), 「警報連動型防災システム」, 千葉 寿, 豊田朋範, 古館守通, 藤崎聡美 (岩手大学, 自然科学研究機構) (登録日 2021 年 10 月 4 日).

B-6) 受賞, 表彰

中村永研, 文部科学大臣表彰研究支援賞 (2021).

豊田朋範, 日本化学会化学技術有功賞 (2022).

B-8) 大学での講義, 客員

岡野泰彬, 中部大学非常勤講師, 「力学」, 2021年度春学期, 「基礎電磁気学」, 2021年度秋学期.