

## Peer-Reviewed Papers

- (1) Electrochemically Driven Specific Alkaline Metal Cation Adsorption on a Graphene Interface  
Satoshi Yasuda, Kazuhisa Tamura, Masaru Kato, Hidehito Asaoka, and Ichizo Yagi,  
J. Phys. Chem. C **125**, 22154 (2021).
- (2) Gallium-effect in a lead-free solder for silver-sheathed superconducting tape  
Shin-Ichi Shamoto, Min Kai Lee, Yuki Fujimura, Keietsu Kondo, Takashi U Ito, Kazuhiko Ikeuchi,  
Satoshi Yasuda and Lieh-Jeng Chang,  
Mater. Res. Express **8**, 076303 (2021).
- (3) Nuclear-spin conversion analysis of  $\nu_2 + \nu_4$  combination band of crystalline methane in phase II  
Takeru Sugimoto and Koichiro Yamakawa,  
J Chem. Phys. **154**, 026101 (2021).
- (4) Impact of Heterometallic Cooperativity of Iron and Copper Active Sites on Electrocatalytic Oxygen Reduction Kinetics  
Masaru Kato, Natsuki Fujibayashi, Daiki Abe, Naohiro Matsubara, Satoshi Yasuda, and Ichizo Yagi,  
ACS Catal. **11**, 2356 (2021).
- (5) Blackening of titanium dioxide nanoparticles by atomic hydrogen and the effect of coexistence of water on the blackening  
Masahide Fujimoto, Masuaki Matsumoto, Naoki Nagatsuka, and Katsuyuki Fukutani,  
RSC Adv. **11**, 4270 (2021).
- (6) Pressure dependence of ferromagnetic phase boundary in BaVSe<sub>3</sub> studied with high-pressure  $\mu^+$ SR  
Jun Sugiyama, Wataru Higemoto, Daniel Andreica, Ola Kenji Forslund, Elisabetta Nocerino, Martin Månsson, Yasmine Sassa, Ritu Gupta, Rustem Khasanov, Hiroto Ohta, and Hiroyuki Nakamura,  
Phys. Rev. B **103**, 104418 (2021).
- (7) High-temperature antiferromagnetism in Yb based heavy fermion systems proximate to a Kondo insulator  
Shintaro Suzuki, Kou Takubo, Kentaro Kuga, Wataru Higemoto, Takashi U. Ito, Takahiro Tomita, Yasuyuki Shimura, Yosuke Matsumoto, Cédric Bareille, Hiroki Wadati, Shik Shin, and Satoru Nakatsuji,  
Phys. Rev. Research **3**, 023140 (2021).
- (8) Focusing and spin polarization of atomic hydrogen beam  
Y. Nagaya, H. Nakatsu, S. Ogura, K. Shimazaki, H. Ueta, K. Takeyasu, and K. Fukutani,  
J. Chem. Phys. **155**, 194201 (2021).
- (9) Atomic arrangements of quasicrystal bilayer graphene: Interlayer distance expansion  
Yuki Fukaya, Yuhao Zhao, Hyun-Woo Kim, Joung Real Ahn, Hirokazu Fukidome, and Iwao Matsuda,  
Phys. Rev. B **104**, L180202 (2021).

### **Invited Talks at International Conferences**

- (1) Positive Muons in SrTiO<sub>3</sub>: Electronic Structure of the Hydrogen-Like Defects and Their Potential Use in Depth-Resolved Detection of Oxygen Vacancies

T.U. Ito

The 9th International Symposium on Surface Science -Toward Sustainable Development- (ISSS-9)  
(Online, November 28 - December 1, 2021)

- (2) Growth of germanene at interfaces between van der Waals materials and Ag(111)

S. Suzuki

Quantum Material Workshop for Emerging Scientists (Online, November 10, 2021)

### **Books and Scientific Articles**

- (1) Pd(210)表面に化学吸着した H<sub>2</sub> オルト-パラ転換

植田寛和, 福谷克之

表面と真空 64, 430 (2021).

- (2) 図説 表面分析ハンドブック 8章 陽電子回折法

深谷有喜(分担執筆)

日本表面真空学会編集(朝倉書店, 東京, 2021)

### **Patents**

None

### **Awards**

- (1) 第16回日本物理学会若手奨励賞(領域9)

その場テラヘルツ・赤外分光法を用いた分子の振動・核スピンダイナミクスの研究

山川 紘一郎

### **Press Release**

None