

大阪大学超高压電子顕微鏡センター

関係発表論文リスト

(2022年)

1. Structural defects and ferromagnetic signature of V-doped Sb₂Te₃ thin films grown on SrTiO₃(001) produced by rf-magnetron sputtering
K. Sato
ACS Omega, Vol. 7 (2022), pp.40480–40484
2. Stacking faults and intercalants in (Ta_{1-x}Ti_x)Se₂ revealed by cross-sectional transmission electron microscopy
K. Sato and T. Matsushita
The Journal of Physical Chemistry C, Vol. 126 (2022), pp.14290–14296
3. Design and development of (Ti, Zr, Hf)-Al based medium entropy alloys and high entropy alloys
T. Nagase, M. Todai, P. Wang, S.-H. Sun, and T. Nakano
Materials Chemistry and Physics, Vol. 276 (2022), 125409
4. Fe-P-C-Ag 液体分離金属ガラスの合金設計と凝固組織
永瀬丈嗣
粉体および粉末冶金, Vol. 69 (2022), pp.185–194
5. In situ TEM visualization of single atom catalysis in solid-state Na-O₂ nanobatteries
H. Sun, Q. Liu, Z. Gao, L. Geng, Y. Li, F. Zhang, J. Yan, Y. Gao, K. Suenaga, L. Zhang, Y. Tang, and J. Huang
Journal of Materials Chemistry A, Vol.10 (2022), pp.6096–6106
6. Excellent strength–ductility balance of Sc-Zr-modified Al–Mg alloy by tuning bimodal microstructure via hatch spacing in laser powder bed fusion
Y. Ekubaru, O. Gokcekaya, T. Ishimoto, K. Sato, K. Manabe, P. Wang, and T. Nakano
Materials & Design, Vol. 221 (2022), 110976
7. チタン含有生体用ハイエントロピー合金の研究・開発
小笠良輔, 松垣あいら, 當代光陽, 石本卓也, 永瀬丈嗣, 中野貴由
チタン, Vol. 70 (2022), pp.44–52

8. Synthesis of superparamagnetic Co-Pt nanoparticle in *Pyrococcus furiosus* virus-like particle crystal
M. Taniguchi, A. Higashiura, N. Kobayashi, D. Kanda, K. Tagata, R. Fukunishi, Y. Yoshikawa, E. Kuromatsu, N. Kishida, Y. Kotani, K. Toyoki, T. Nakamura, R. Nakatani, A. Nakagawa, and Y. Shiratsuchi
Journal of Physics and Chemistry of Solids, Vol. 169 (2022), 110840
9. Revealing hydrogen spillover pathways in reducible metal oxides
K. Shun, K. Mori, S. Masuda, N. Hashimoto, Y. Hinuma, H. Kobayashi, and H. Yamashita
Chemical Science, Vol. 13 (2022), pp.8137–8147
10. Direct synthesis of a regenerative CaO-Fe₃O₄-SiO₂ composite adsorbent from converter slag for CO₂ capture applications
Y. Kuwahara, A. Hanaki, and H. Yamashita
ACS Sustainable Chemistry & Engineering, Vol. 10 (2022), pp.372–381
11. Hydrodeoxygenation of aromatic ketones under mild conditions over Pd-loaded hydrogen molybdenum bronze with plasmonic features
Y. Kuwahara, M. Okada, H. Ge, and H. Yamashita
Chemistry Letters, Vol. 51 (2022), pp.166–169
12. Ru/H_xMoO_{3-y} with plasmonic effect for boosting photothermal catalytic CO₂ methanation
H. Ge, Y. Kuwahara, K. Kusu, Z. Bian, and H. Yamashita
Applied Catalysis B: Environmental, Vol. 317 (2022), 121734
13. Crystal facet engineering and hydrogen spillover-assisted synthesis of defective Pt/TiO_{2-x} nanorods with enhanced visible light-driven photocatalytic activity
Y. Yamazaki, T. Toyonaga, N. Doshita, K. Mori, Y. Kuwahara, S. Yamazaki, and H. Yamashita
ACS Applied Materials & Interfaces, Vol. 14 (2022), pp.2291–2300
14. Characterization of hierarchical lath martensite microstructure in low carbon steels using ultra-high voltage TEM and SEM-EBSD analysis
M. Sugiyama, M. Takei, S. Sekida, and N. Maruyama
IOP Conference Series: Materials Science and Engineering, 42nd Risø International Symposium on Materials Science, Vol. 1249 (2022), 012020
15. Growth of single-walled carbon nanotubes from solid carbon nanoparticle seeds via cap

formation engineering with a two-step growth process and water vapor supply

M. Wang, K. Nakamura, M. Arifuku, N. Kiyoyanagi, T. Inoue, and Y. Kobayashi
ACS Omega, Vol. 7 (2022), pp.3639–3648

16. Combination effect of growth enhancers and carbon sources on synthesis of single-walled carbon nanotubes from solid carbon growth seeds
M. Wang, Y. Liu, M. Maekawa, M. Arifuku, N. Kiyoyanagi, T. Inoue, and Y. Kobayashi
Diamond & Related Materials, Vol. 130 (2022), 109516
17. Effect of Rho-associated kinase inhibitor on growth behaviors of human induced pluripotent stem cells in suspension culture
T. Matsumoto, M.- H. Kim, and M. Kino-oka
Bioengineering, Vol. 9 (2022), 613
18. Selective glycerol oxidation to glyceric acid under mild conditions using Pt/CeO₂-ZrO₂-Fe₂O₃/SBA-16 catalysts
Y.-B. Choi, N. Nunotani, K. Morita, and N. Imanaka
Journal of Asian Ceramic Societies, Vol.10 (2022), pp.178–187
19. Phosphorus-alloying as a powerful method for designing highly active and durable metal nanoparticle catalysts for the deoxygenation of sulfoxides: ligand and ensemble effects of phosphorus
H. Ishikawa, S. Yamaguchi, A. Nakata, K. Nakajima, S. Yamazoe, J. Yamasaki, T. Mizugaki, and T. Mitsudome
JACS Au, Vol. 2 (2022), pp.419–427
20. Selective hydrodeoxygénération of esters to unsymmetrical ethers over a zirconium oxide-supported Pt–Mo catalyst
K. Sakoda, S. Yamaguchi, T. Mitsudome, and T. Mizugaki
JACS Au, Vol. 2 (2022), pp.665–672
21. Green oxidation of indoles using molecular oxygen over a copper nitride nanocube catalyst
H. Xu, S. Yamaguchi, T. Mitsudome and T. Mizugaki
European Journal of Organic Chemistry, (2022), e20220826
22. Molecular beam homoepitaxy of N-polar AlN: Enabling role of aluminum-assisted surface cleaning
Z. Zhang, Y. Hayashi, T. Tohei, A. Sakai, V. Protasenko, J. Singhal, H. Miyake, H.G. Xing, D. Jena, and Y. Cho

23. Dependence of the core–shell structure on the lipid composition of nanostructured lipid carriers: implications for drug carrier design
N. Izza, N. Watanabe, Y. Okamoto, K. Suga, Y. Wibisono, N. Kajimura, K. Mitsuoka, and H. Umakoshi
ACS Applied Nano Materials, Vol. 5 (2022) pp.9958–9969
24. Hydrogen peroxide splitting on Nafion-coated graphene quantum dots/carbon nitride photocatalysts
Y. Shiraishi, A. Soramoto, S. Ichikawa, S. Tanaka, and T. Hirai
Journal of Photochemistry & Photobiology, A: Chemistry, Vol. 430 (2022), 113949.
25. Solar-driven generation of hydrogen peroxide on phenol-resorcinol-formaldehyde resin photocatalysts
Y. Shiraishi, K. Miura, M. Jio, S. Tanaka, S. Ichikawa, and T. Hirai
ACS Materials Au, Vol. 2 (2022), pp.709–718
26. Precisely controlled synthesis of Co/N species containing porous carbon for oxygen reduction reaction via anion exchange and CO₂ activation
Y. Shu, Y. Fujimoto, K. Miyake, Y. Uchida, S. Tanaka, and N. Nishiyama
New Journal of Chemistry, Vol. 46 (2022), pp.2038–2043
27. Vapor-assisted crystallization of *in situ* glycine-modified UiO-66 with enhanced CO₂ adsorption
Y. Fujimoto, Y. Shu, Y. Taniguchi, K. Miyake, Y. Uchida, S. Tanaka, and N. Nishiyama
New Journal of Chemistry, Vol. 46 (2022), pp.1779–1784
28. High coke deposition resistance by Cr loading on zeolite defects: reduced regeneration in cracking reactions
S. Kokuryo, K. Tamura, K. Miyake, Y. Uchida, M. Miyamoto, Y. Oumi, A. Mizusawa, T. Kubo, and N. Nishiyama
Catalysis Science & Technology, Vol. 12 (2022), pp.7270–7274
29. A nanosheet molding method to estimate the size of bilayers suspended in liquids
K. Sasaki, J. A. Hernandez Gaitan, Y. Tokuda, K. Miyake, Y. Uchida, and N. Nishiyama
Journal of Materials Chemistry C, Vol. 10 (2022), pp.15816–15821
30. Mg and Zn co-doped mesoporous ZSM-5 as an ideal catalyst for ethane dehydroaromatization

reaction

T. Sumi, S. Kokuryo, Y. Fujimoto, X. Li, K. Miyake, Y. Uchida, and N. Nishiyama
Catalysis Science & Technology, Vol. 12 (2022), pp.7010–7017

31. Amorphous aluminosilicate nanosheets as universal precursors for the synthesis of diverse zeolite nanosheets for polymer-cracking reactions
K. Sasaki, J. A. Hernandez Gaitan, T. Okue, S. Matoba, Y. Tokuda, K. Miyake, Y. Uchida, and N. Nishiyama
Angewandte Chemie International Edition, Vol. 61 (2022), e202213773
32. Amino-acid-functionalized metal–organic frameworks as excellent precursors toward bifunctional metal-free electrocatalysts
Y. Shu, Y. Fujimoto, Y. Taniguchi, K. Miyake, Y. Uchida, and N. Nishiyama
ACS Applied Energy Materials, Vol. 5 (2022), pp.11091–11097
33. Hierarchical zeolites with high hydrothermal stability prepared via desilication of OSDA-occluded zeolites
X. Li, J. A. Hernandez Gaitan, S. Kokuryo, T. Sumi, K. Miyake, Y. Uchida, and N. Nishiyama
Microporous and Mesoporous Materials, Vol. 344 (2022), 112096
34. LDPE cracking over mono- and divalent metal-doped beta zeolites
S. Kokuryo, K. Tamura, K. Miyake, Y. Uchida, A. Mizusawa, T. Kubo, and N. Nishiyama
Catalysis Science & Technology, Vol. 12 (2022), pp.4138–4144
35. Improving coke resistance of Zn ion exchanged ZSM-5 on dehydroaromatization of ethane by Cr species loading
Y. Fujimoto, T. Sumi, K. Miyake, Y. Uchida, and N. Nishiyama
Chemistry Letters, Vol. 51 (2022), pp.515–517
36. A novel strategy to enhance acid strength of zeolites by incorporating Ge into zeolite framework
S. Kokuryo, H. Al-Jabri, K. Miyake, Y. Hirota, K. Ono, Y. Uchida, and N. Nishiyama
Chemistry Select, Vol. 7 (2022), e202200756
37. Mechanochemical synthesis of dispersible platinum nanosheets for enhanced catalysis in a microreactor
K. Sasaki, K. Miyake, Y. Uchida, and N. Nishiyama

38. Design of Zr- and Al-doped BEA-type zeolite to boost LDPE cracking
S. Kokuryo, K. Miyake, Y. Uchida, S. Tanaka, M. Miyamoto, Y. Oumi, A. Mizusawa, T. Kubo, and N. Nishiyama
ACS Omega, Vol. 7 (2022), pp.12971–12977
39. Electrochemical hydrogen evolution reaction over Co/P doped carbon derived from triethyl phosphite-deposited 2D nanosheets of Co/Al layered double hydroxides
Y. Shu, K. Sasaki, Y. Fujimoto, K. Miyake, Y. Uchida, S. Tanaka, and N. Nishiyama
International Journal of Hydrogen Energy, Vol. 47 (2022), pp.10638–10645.
40. Zr-doped SAPO-34 with enhanced Lewis acidity
S. Kokuryo, K. Tamura, K. Miyake, Y. Uchida, A. Mizusawa, T. Kubo, and N. Nishiyama
New Journal of Chemistry, Vol. 46 (2022), pp.3838–3843
41. Defect engineering to boost catalytic activity of Beta zeolite on low-density polyethylene cracking
S. Kokuryo, K. Miyake, Y. Uchida, A. Mizusawa, T. Kubo, and N. Nishiyama
Materials Today Sustainability, Vol. 17 (2022), 100098
42. Quantitative spatial mapping of distorted state phases during the metal-insulator phase transition for nanoscale VO₂ engineering
Y. Ashida, T. Ishibe, J. Yang, N. Naruse, and Y. Nakamura
Science and Technology of Advanced Materials, Vol. 24, (2022), 2150525
43. Seed-assisted epitaxy of intermetallic compounds with interface-determined orientation: Incommensurate Nowotny chimney-ladder FeGe_γ epitaxial film
T. Terada, R. Kitaura, S. Ishigaki, T. Ishibe, N. Naruse, Y. Mera, R. Asahi, and Y. Nakamura
Acta Materialia, Vol. 236 (2022), 118130
44. Giant enhancement of Seebeck coefficient by deformation of silicene buckled structure in calcium-intercalated layered silicene film
T. Terada, Y. Uematsu, T. Ishibe, N. Naruse, K. Sato, T. Quang Nguyen, E. Kobayashi, H. Nakano, and Y. Nakamura
Advanced Materials Interfaces, Vol. 9 (2022), 2101752
45. VEGF-mediated augmentation of autophagic and lysosomal activity in endothelial cells

defends against intracellular streptococcus pyogenes

S.-L. Lu, H. Omori, Y. Zhou, Y.-S. Lin, C.-C. Liu, J.-J. Wu, and T. Noda
mBio, Vol. 13, No. 4 (2022), pp.1–17

46. VEGF (vascular endothelial growth factor) provides antimicrobial effects via autophagy and lysosomal empowerment in endothelial cells
S.-L. Lu and Takeshi Noda
Autophagy Reports, Vol. 1 (2022), pp.555–558
47. Structures of multisubunit membrane complexes with the CRYO ARM 200
C. Gerle, J. Kishikawa, T. Yamaguchi, A. Nakanishi, O. Çoruh, F. Makino, T. Miyata, A. Kawamoto, K. Yokoyama, K. Namba, G. Kurisu, and T. Kato
Microscopy, Vol. 71 (2022), pp.249–261
48. A novel capsid protein network allows the characteristic internal membrane structure of *Marseilleviridae* giant viruses
A. Chihara, R. N. Burton-Smith, N. Kajimura, K. Mitsuoka, K. Okamoto, C. Song, and K. Murata
Scientific Reports, Vol. 12 (2022), 21428
49. CAMSAP2 organizes a γ -tubulin-independent microtubule nucleation centre through phase separation
T. Imasaki, S. Kikkawa, S. Niwa, Y. Saijo-Hamano, H. Shigematsu, K. Aoyama, K. Mitsuoka, T. Shimizu, M. Aoki, A. Sakamoto, Y. Tomabechi, N. Sakai, M. Shirouzu, S. Taguchi, Y. Yamagishi, T. Setsu, Y. Sakihama, E. Nitta, M. Takeichi, and R. Nitta
eLife, Vol. 11 (2022), e77365
50. Understanding the structure of Cu-doped MgAl₂O₄ for CO₂ hydrogenation catalyst precursor using experimental and computational approaches
T. Joutsuka, R. Hamamura, K. Fujiwara, T. Honma, M. Nishijima, and S. Tada
International Journal of Hydrogen Energy, Vol. 47 (2022), pp.21369–21374
51. Active sites on Zn_xZr_{1-x}O_{2-x} solid solution catalysts for CO₂-to-methanol hydrogenation
S. Tada, N. Ochiai, H. Kinoshita, M. Yoshida, N. Shimada, T. Joutsuka, M. Nishijima, T. Honma, N. Yamauchi, Y. Kobayashi, and K. Iyoki
ACS Catalysis, Vol. 12 (2022), pp.7748–7759
52. Structural basis of unisite catalysis of bacterial F₀F₁-ATPase
A. Nakano, J. Kishikawa, A. Nakanishi, K. Mitsuoka, and K. Yokoyama

53. Structural snapshots of V/A-ATPase reveal the rotary catalytic mechanism of rotary ATPases
J. Kishikawa, A. Nakanishi, A. Nakano, S. Saeki, A. Furuta, T. Kato, K. Mistuoka, and K. Yokoyama
Nature Communications, Vol. 13 (2022), pp.1–11
54. Phenol derivatives obtained from grape seed extract show virucidal activity against murine norovirus
V. Raml Kudkyal, I. Matsuura, H. Hiramatsu, K. Hayashi, and T. Kawahara
Molecules, Vol. 27 (2022), 7739
55. Origin of spurious intensity in vacuum near sample edge in bright field TEM images
M. Hayashida, M. Malac, and J. Yamasaki
Micron, Vol. 162 (2022), 103348
56. Interpretation of mean free path values derived from off-axis electron holography amplitude measurements
C. Cassidy, M. Tokoro Schreiber, M. Beleggia, J. Yamasaki, H. Adaniya, and T. Shintake
Micron, Vol. 162 (2022), 103346
57. Comparison of magnetic anisotropy and structural properties in chemically ordered CoPt and FePt nanoparticles
A. Tamion, F. Tournus, N. Blanc, A. Hillion, O. Proux, A. Rogalev, F. Wilhelm, J. Gutiérrez Valdés, L. E. Díaz-Sánchez, K. Sato, G. M. Pastor, and V. Dupuis
Physical Review B, Vol. 106 (2022), 104420
58. Electrochemical sensor made with 3D micro-/mesoporous structures of CoNi-N/GaN for noninvasive detection of glucose
S. Chen, H. Huang, H. Sun, Q. Liu, H. Zhu, J. Zhao, P. Liu, and J. Yu
ACS Applied Materials & Interfaces, Vol. 14 (2022), pp.49035–49046