

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

(2019年)

1. 「高度微細構造解析に関する観察支援事業」～文部科学省ナノテクノロジープラットフォーム微細構造解析事業体の紹介～ナノテクノロジー設備供用拠点(大阪大学)
保田英洋
まてりあ, Vol. 58, No. 12 (2019), pp.738–745
2. High-voltage scanning transmission electron microscopy:a tool for structural characterization of micrometer-thick specimens
K. Sato, Y. Yamashita, H. Yasuda and H. Mori
Materials Transactions, Vol. 60, No. 5 (2019), pp.675–677
3. 超高压電子顕微鏡による観察可能試料厚さの定量評価
佐藤和久、保田英洋
セラミックス, Vol.54, (2019), pp.90–93
4. Microstructure and magnetic properties of Cu-Ag-La-Fe immiscible alloys with an amorphous phase
T. Nagase, T. Terai, T. Kakeshita, M. Matsumoto and Y. Fujii
Materials Transactions, Vol. 60, No. 4 (2019), pp.554–560
5. Additive manufacturing of dense components in beta-titanium alloys with crystallographic texture from a mixture of pure metallic element powders
T. Nagase, T. Hori, M. Todai, S.-H. Sun and T. Nakano
Materials and Design, Vol. 173, (2019), pp.107771 1–10
6. Solidification microstructures of the ingots obtained by arc melting and cold crucible levitation melting in TiNbTaZr medium-entropy alloy and TiNbTaZrX (X = V, Mo, W) high-entropy alloys
T. Nagase, K. Mizuuchi and T. Nakano
Entropy, Vol. 21, (2019), pp.483 1–18

7. Alloy design and fabrication of ingots in Cu-Zn-Mn-Ni-Sn high-entropy and Cu-Zn-Mn-Ni medium-entropy brasses
T. Nagase, A. Shibata, M. Matsumuro, M. Takemura and S. Semboshi
Materials and Design, Vol. 181, (2019), pp.107900 1–9
8. Development of Fe-Co-Cr-Mn-Ni-C high entropy cast iron (HE cast iron) available for casting in air atmosphere
T. Nagase, T. Kakeshita, K. Matsumura, K. Nakazawa, S. Furuya, N. Ozoe and K. Yoshino
Materials and Design, Vol. 184, (2019), pp.108172 1–10
9. 耐熱合金・生体合金として開発がすすむ 4 族・5 族・6 族元素からなるハイエントロピー合金の凝固組織
永瀬丈嗣, 水内潔, 當代光陽, 中野貴由
まてりあ, Vol.58, No.2 (2019), p.78
10. 走査透過電子顕微鏡を用いた球状黒鉛鋳鉄核物質の微量元素分布解明
永瀬丈嗣, 丸山徹, 五十嵐芳夫
まてりあ, Vol.58, No.2 (2019), p.86
11. Ag-rich Ag–Cu–La–Fe 液体分離合金の凝固組織と磁気的性質
永瀬丈嗣, 寺井智之, 掛下知行, 森田健太
材料, Vol.68, No.3 (2019), pp.205–211
12. Cu の分布に注目した球状黒鉛鋳鉄の電子顕微鏡観察
永瀬丈嗣, 丸山徹, 浅野和典, 五十嵐芳夫
鋳造工学, Vol.91, No.8 (2019), pp.512–520
13. 球状黒鉛鋳鉄と球状黒鉛ハイエントロピー合金
永瀬丈嗣
金属, Vol.89, No.10 (2019), pp.899–910
14. 純元素粉末を用いたチタン合金の金属積層造形
永瀬丈嗣, 當代光陽, 中野貴由
鋳造工学, Vol.91, No.9 (2019), pp.627–633
15. Al–Mg–Li–Ca 系軽量ミディアムエントロピー合金の合金設計と鋳造材の作製
永瀬丈嗣, 寺山朗, 長岡孝, 府山伸行, 阪本辰顕
鋳造工学, Vol.91, (2019), pp.717–729

16. Empirical determination of transmission attenuation curves in mass–thickness contrast
TEM imaging
J. Yamasaki, Y. Ubata and H. Yasuda
Ultramicroscopy, Vol. 200, (2019), pp.20–27
17. Phase imaging and atomic-resolution imaging by electron diffractive imaging
J. Yamasaki, S. Morishita, Y. Shimaoka, K. Ohta and H. Sasaki
Japanese Journal of Applied Physics, Vol. 58, (2019), pp.120502 1–14
18. 厚さ増加に伴う TEM 像強度減衰とトモグラフィーへの影響
山崎 順
顕微鏡, Vol.54, No.3 (2019), pp.149–152
19. Development of non-equiautomic Ti-Nb-Ta-Zr-Mo high-entropy alloys for metallic biomaterials
T. Hori, T. Nagase, M. Todai, A. Matsugaki and T. Nakano
Scripta Materialia, Vol. 172, (2019), pp.83–87
20. Defect engineering of MoS₂ and its impacts on electrocatalytic and photocatalytic behavior in hydrogen evolution reactions
Y. Zhang, Y. Kuwahara, K. Mori and H. Yamashita
Chemistry – An Asian Journal, Vol. 14, No. 2 (2019), pp.278–285
21. Plasmonic Ru/hydrogen molybdenum bronzes with tunable oxygen vacancies for light-driven reduction of *p*-nitrophenol
H. Yin, Y. Kuwahara, K. Mori, M. Che and H. Yamashita
Journal of Materials Chemistry A, Vol. 7, No. 8 (2019), pp.3783–3789
22. RuPd alloy nanoparticles supported on plasmonic H_xMoO_{3-y} for efficient photocatalytic reduction of *p*-nitrophenol
H. Yin, Y. Kuwahara, K. Mori and H. Yamashita
European Journal of Inorganic Chemistry, No. 33 (2019), pp.3745–3752
23. Engineering of surface environment of Pd nanoparticle catalysts on carbon support with pyrene-thiol ligands for semihydrogenation of alkynes
T. Yoshii, D. Umemoto, Y. Kuwahara, K. Mori and H. Yamashita
ACS Applied Materials & Interfaces, Vol. 11, No. 41 (2019), pp.37708–37719

24. Insights on palladium decorated nitrogen-doped carbon xerogels for the hydrogen production from formic acid
M. Navlani-García, D. Salinas-Torres, K. Mori, A. F. Léonard, Y. Kuwahara, N. Job and H. Yamashita
Catalysis Today, Vol. 324, (2019), pp.90–96
25. Plasmonic catalysis of Ag nanoparticles deposited on CeO₂ modified mesoporous silica for the nitrostyrene reduction under light irradiation conditions
P. Verma, Y. Kuwahara, K. Mori and H. Yamashita
Catalysis Today, Vol. 324, (2019), pp.83–89
26. PdAg nanoparticles within core-shell structured zeolithic imidazolate framework as a dual catalyst for formic acid-based hydrogen storage/production
M. Wen, K. Mori, Y. Futamura, Y. Kuwahara, M. Navlani-García, T. An and H. Yamashita
Scientific Reports, Vol. 9, No. 5 (2019), pp.15675–15685
27. Heterogeneous microstructure of low-carbon lath martensite with continuous yielding behavior in Fe-C-Mn alloys
M. Sugiyama, G. Sawa, K. Hata and N. Maruyama
Materials Science and Engineering (40th Riso International Symposium on Material Science), Vol. 580, No. 5 (2019), pp.012045 1–6
28. Hydrogen peroxide detection with a silver nanoparticle grating chip fabricated by plasmonic plating
H. Yoshikawa, K. Hieda, K. Ikeda and E. Tamiya
Analytical Methods, Vol. 11, (2019), pp.2991–2995
29. Electron-beam enhanced creep deformation of amorphous silicon nano-cantilever
H. Hirakata, K. Konishi, T. Kondo and K. Minoshima
Journal of Applied Physics, Vol. 126, (2019), pp.105102 1–10
30. Colonization and competition dynamics of plant growth-promoting/inhibiting bacteria in the phytosphere of the duckweed *lemnula minor*
H. Ishizawa, M. Kuroda, K. Inoue, D. Inoue, M. Morikawa and M. Ike
Microbial Ecology, Vol. 77, (2019), pp.440–450

31. Development of co supported on Co-Al spinel catalysts from exsolution of amorphous Co-Al oxides for carbon dioxide reforming of methane
Y. J. Wong, M. K. Koh, N. F. Khairudin, S. Ichikawa, Y. Morikawa and A. R. Mohamed
ChemCatChem, Vol. 11, (2019), pp.5593–5605
32. Demonstrative operation of fourterminal memristive devices fabricated on reduced TiO₂ single crystals
S. Takeuchi, T. Shimizu, T. Isaka, T. Tohei, N. Ikarashi and A. Sakai
Scientific Reports, Vol. 9, No. 5 (2019), pp.2601 1–9
33. Gate tuning of synaptic functions based on oxygen vacancy distribution control in four-terminal TiO_{2-x} memristive devices
Z. Nagata, T. Shimizu, T. Isaka, T. Tohei, N. Ikarashi and A. Sakai
Scientific Reports, Vol. 9, (2019), pp.10013 1–7
34. Local current leakage at threading dislocations in GaN bulk single crystals grown by a modified Na-flux method
T. Hamachi, T. Tohei, M. Imanishi, Y. Mori and A. Sakai
Japanese Journal of Applied Physics, Vol. 58, (2019), pp.050918 1–4
35. Correlation between current leakage and structural properties of threading dislocations in GaN bulk single crystals grown using a Na-flux method
T. Hamachi, T. Tohei, M. Imanishi, Y. Mori and A. Sakai
Japanese Journal of Applied Physics, Vol. 58, (2019), pp.SCCB23 1–6
36. Fabrication of Co/P25 coated with thin nitrogen-doped carbon shells (Co/P25/NC) as an efficient electrocatalyst for oxygen reduction reaction (ORR)
K. Miyake, T. Takemura, A. Gabe, Y. Zhu, M. Ota, Y. Shu, Y. Hirota, Y. Uchida, S. Tanaka, M. Katayama, Y. Inada, E. Morallón, D. Cazorla-Amorós and N. Nishiyama
Electrochimica Acta, Vol. 296, (2019), pp.867–873
37. Synthesis of MOF nanosheets in hyperswollen lyotropic lamellar phase
T. Omiya, K. Sasaki, Y. Uchida and N. Nishiyama
Molecular Crystals and Liquid Crystals, Vol. 684, (2019), pp.1–6
38. Bifunctional ZSM-5/hydrotalcite composite for enhanced production of 5-hydroxymethylfurfural from glucose
M. Subsadsana, K. Miyake, K. Ono, M. Ota, Y. Hirota, N. Nishiyama and S. Sansuk
New Journal of Chemistry, Vol. 43, (2019), pp.9483–9490

39. Anchoring a Co/2-methylimidazole complex on ion-exchange resin and its transformation to Co/N-doped carbon as an electrocatalyst for the ORR
Y. Zhu, K. Miyake, Y. Shu, A. Gabe, Y. Hirota, Y. Uchida, S. Tanaka, E. Morallón, D. Cazorla-Amorós and N. Nishiyama
Catalysis Science & Technology, Vol. 9, (2019), pp.578–582
40. Development of high performance heterogeneous catalysts for selective cleavage of C-O and C-C bonds of biomass-derived oxygenates
T. Mizugaki and K. Kaneda
The Chemical Record, Vol. 19, No. 7 (2019), pp.1179–1198
41. Efficient synthesis of benzofurans via cross-coupling of catechols with hydroxycoumarins using O₂ as an oxidant catalyzed by AlPO₄-supported Rh nanoparticle
Z. Maeno, M. Yamamoto, T. Mitsudome, T. Mizugaki and K. Jitsukawa
ChemistrySelect, Vol. 4, No. 38 (2019), pp.11394–11397
42. Thermoelectric power factor enhancement based on carrier transport physics in ultimately phonon-controlled Si nanostructures
S. Sakane, T. Ishibe, T. Taniguchi, N. Naruse, Y. Mera, T. Fujita, Md. M. Alam, K. Sawano, N. Mori and Y. Nakamura
Materials Today Energy, Vol. 13, (2019), pp.56–63
43. Reversible changes of chromosome structure upon different concentrations of divalent cations
A. Dwiranti, H. Takata and K. Fukui
Microscopy and Microanalysis, Vol. 25, No. 3 (2019), pp.817–821
44. 3D observation of chromosome scaffold structure using a 360° electron tomography sample holder
R. Phengchat, M. Hayashida, N. Ohmido, D. Homeniuk and K. Fukui
Micron, Vol. 126, (2019), pp.102736 1–10
45. Ag particles for sinter bonding: Flakes or spheres?
J. Yeom, S. Nagao, C. Chen, T. Sugahara, H. Zhang, C. Choe, C. Li and K. Suganuma
Applied Physics Letters, Vol. 114, (2019), pp.253103 1–4

46. Doping of Nb⁵⁺ species at the Au–TiO₂ interface for plasmonic photocatalysis enhancement
Y. Shiraishi, J. Imai, N. Yasumoto, H. Sakamoto, S. Tanaka, S. Ichikawa and T. Hirai
Langmuir, Vol. 35, (2019), pp.5455–5462
47. Resorcinol–formaldehyde resins as metal-free semiconductor photocatalysts for solar-to-hydrogen peroxide energy conversion
Y. Shiraishi, T. Takii, T. Hagi, S. Mori, Y. Kofuji, Y. Kitagawa, S. Tanaka, S. Ichikawa and T. Hirai
Nature Materials, Vol. 18, (2019), pp.985–993
48. Air-stable and reusable cobalt ion-doped titanium oxide catalyst for alkene hydrosilylation
T. Mitsudome, S. Fujita, M. Sheng, J. Yamasaki, K. Kobayashi, T. Yoshida, Z. Maeno, T. Mizugaki, K. Jitsukawa and K. Kaneda
Green Chemistry, Vol. 21, No. 16 (2019), pp.4566–4570
49. Diffractive Imaging
K. Gohara, H. Shioya and J. Yamasaki
3D local structure and functionality design of materials, published by World Scientific Publishing and Maruzen Publishing, (2019), subchapter 4.1
50. In-situ HVEM observation under 2 MeV electron irradiations on Y-Ti-O nanoparticles in 12Cr-ODS steel at 723K
S. R. Oh, S. Kano, H. Yang, J. McGrady, H. Yasuda and H. Abe
Journal of Nuclear Materials, Vol. 524, (2019), pp.278–285
51. 鉄鋼中の材料強化因子の電子照射誘起不安定化現象のその場観察実験
阿部弘亨、叶野翔、楊会龍、J.P. McGrady、S.R. Oh、保田英洋、柴山環樹
顕微鏡, Vol. 54, (2019), pp.122–125
52. Degradation mechanism of tin phosphide as Na-ion battery negative electrode
H. Usui, Y. Domi, R. Yamagami and H. Sakaguchi
Green Energy & Environment, Vol. 4, No. 5 (2019), pp.121–126
53. Single-crystalline Nb-doped Rutile TiO₂ nanoparticles as anode materials for Na-ion batteries
H. Usui, Y. Domi, S. Ohnishi and H. Sakaguchi
ACS Applied Nano Materials, Vol. 2, (2019), pp.5360–5364

54. Germanium catalyzed vapor–liquid–solid growth and characterization of amorphous silicon oxide nanotubes: comparison to the growth of its nanowires
K. Hatano, K. Kobayashi, T. Hiraiwa, T. Yoshida, H. Yasuda and F. Kokai
SN Applied Sciences. Vol. 1, No. 1 (2019), pp.86 1–13
55. Nonlocal self-organization of long stacking faults from highly strained nanocomposite film of complex oxide
T. Horide, M. Ishimaru, K. Sato and K. Matsumoto
Physical Review Materials, Vol. 3, No. 5 (2019), pp.013403 1–7
56. 電子励起効果によるアモルファス物質の低温結晶化
石丸学, 仲村龍介
日本結晶学会誌, Vol. 61, No. 1 (2019), pp.29–34
57. 低エネルギー電子線照射によるアモルファス GeSn の結晶化
石丸学, 仲村龍介
顕微鏡, Vol. 54, No. 3 (2019), pp.126–130
58. The relation between amorphous structure and explosive crystallization of sputter-deposited amorphous germanium thin films
M. Okugawa, R. Nakamura, H. Numakura, A. Heya, N. Matsuo and H. Yasuda
Japanese Journal of Applied Physics, Vol. 58, No. 4 (2019), pp.045501 1–6
59. Biochemical and morphological classification of disease-associated alpha-synuclein mutants aggregates
G. Tanaka, T. Yamanaka, Y. Furukawa, N. Kajimura, K. Mitsuoka and N. Nukina
Biochemical and Biophysical Research Communications, Vol. 508, (2019),
pp.729–734
60. Sequence- and seed-structure-dependent polymorphic fibrils of alpha-synuclein
G. Tanaka, T. Yamanaka, Y. Furukawa, N. Kajimura, K. Mitsuoka and N. Nukina
BBA-Molecular Basis of Disease, Vol. 1865, (2019), pp.1410–1420
61. Cryo-EM studies of the rotary H⁺-ATPase/synthase from *Thermus thermophilus*
A. Nakanishi, J. Kishikawa, K. Mitsuoka and K. Yokoyama
Biophysics and Physicobiology, Vol. 16, (2019), pp.140–146

62. Fluorescent, recombinant-protein-conjugated, near-infrared-emitting quantum dots for in vitro and in vivo dual-color molecular imaging

S. Tsuboi and T. Jin

ChemBioChem, Vol. 20, (2019), pp.568–575

63. BRET based dual-colour (visible/near-infrared) molecular imaging using a quantum dot/EGFP–luciferase conjugate

S. Tsuboi and T. Jin

RSC Advances, Vol. 9, (2019), pp.34964–34971

64. Microstructures of dome-shaped hillocks formed on B doped CVD homoepitaxial diamond films

N. Tsubouchi, M. Ogura and T. Makino

Diamond & Related Materials, Vol. 97, (2019), pp.107422 1–9

65. An ultra-sensitive label-free electrochemiluminescence CKMB immunosensor using a novel nanocomposite-modified printed electrode

J. Adhikari, N. A. Keasberry, A. H. Mahadi, H. Yoshikawa, E. Tamiya and M. U. Ahmed

RSC Advances, Vol. 9, No. 5 (2019), pp.34283–34292