

発 表 論 文

金属、合金

1. Compositional Regions of Single Phases at 1800° C in Mo-rich Mo-Si-B Ternary System, Seong-Ho Ha, Kyosuke Yoshimi, Kouichi Maruyama, Rong Tu, Takashi Goto, <http://dx.doi.org/10.1016/j.msea>, Materials Science and Engineering A, 552, 2012, 179-188
2. Interaction between interstitial and substitutional solute atoms in iron, NUMAKURA Hiroshi, Proceedings of the 3rd International Symposium on Steel Science, 2012, 19-28
3. Flow Stress Analysis for Determining Critical Condition of Dynamic Ferrite Transformation in 6Ni-0.1C Steel, okeun Park, Akinobu Shibata, Daisuke Terada and Nobuhiro Tsuji, [10.1016/j.actamat.2012.09.043](http://dx.doi.org/10.1016/j.actamat.2012.09.043), Acta Mater., Vol.61, Issue 1, 2013, 163-173.
4. Occurrence of dynamic ferrite transformation in low carbon steel above Ae3, Nokeun Park, Sunisa Khamsuk, Akinobu Shibata and Nobuhiro Tsuji, [10.1016/j.scriptamat.2012.12.010](http://dx.doi.org/10.1016/j.scriptamat.2012.12.010), Scripta Mater., Vol. 68, Issue 7, 2013, 538-541
5. Effect of austenite grain size on kinetics of dynamic ferrite transformation in low carbon steel, Nokeun Park, Sunisa Khamsuk, Akinobu Shibata and Nobuhiro Tsuji, [10.1016/j.scriptamat.2012.12.021](http://dx.doi.org/10.1016/j.scriptamat.2012.12.021), Scripta Mater., Vol.68, Issue 8, 2013, 611-614.

半導体

1. Biexciton Luminescence from Individual Isoelectronic Traps in Nitrogen delta-Doped GaAs, K. Takamiya, T. Fukushima, S. Yagi, Y. Hijikata, T. Mochizuki, M. Yoshita, H. Akiyama, S. Kuboya, K. Onabe, R. Katayama, and H. Yaguchi, [10.1143/APEX.5.111201](http://dx.doi.org/10.1143/APEX.5.111201), Applied Physics Express, 5, 2012, 111201 1-3
2. The impact of Ge codoping on the enhancement of photovoltaic characteristics of B-doped Czochralski grown Si crystal, Mukannan Arivanandhana, Raira Gotoh, Tatsuro Watahiki, Kozo Fujiwara, Yasuhiro Hayakawa, Satoshi Uda, Makoto Konagai, [10.1063/1.3687935](http://dx.doi.org/10.1063/1.3687935), Journal of Applied Physics, 111, 2012, 043707
3. Reflectance anisotropies of compressively strained Si grown on vicinal Si_{1-x}C_x(001), R. E. Balderas-Navarro, N. A. Ulloa-Castillo, K. Arimoto, G. Ramirez-Melendez, L. F. Lastras-Martinez, H. Furukawa, J. Yamanaka, A. Lastras-Martinez, J. M. Flores-Camacho, N. Usami, D. Stifter, K. Hingerl, [10.1063/1.4773560](http://dx.doi.org/10.1063/1.4773560), Applied Physics, 102, 2013, 11902
4. Highly (111)-oriented Ge thin films on insulators formed by Al-induced crystallization, K. Toko, M. Kurosawa, N. Saitoh, N. Yoshizawa, N. Usami, M. Miyao, and T. Suemasu, [10.1063/1.4744962](http://dx.doi.org/10.1063/1.4744962), Applied Physics Letters, 101, 2012, 072106 1-3
5. Orientation control of large-grained Si films on insulators by thickness-modulated Al-induced crystallization, R. Numata, K. Toko, N. Saitoh, N. Yoshizawa, N. Usami, and T. Suemasu, [10.1021/cg4000878](http://dx.doi.org/10.1021/cg4000878), Crystal Growth and Design, 2013

6. Temperature dependent Al-induced crystallization of amorphous Ge thin films on SiO₂ substrates, Kaoru Toko, Naoki Fukata, Koki Nakazawa, Masashi Kurosawa, Noritaka Usami, Masanobu Miyao, and Takashi Suemasu, 10.1016/j.jcrysgro.2013.03.031, Journal of Crystal Growth, 2013

セラミックス

1. Thermoelectric Properties of Li-Doped CuO, N. Yoshida, T. Naito and H. Fujishiro, Jpn. J. Appl. Phys., 52, 2013, 031102–5

超伝導材料

1. Vortex configuration and vortex-vortex interaction in nano-structured superconductors, Masaru Kato, Yuhei Niwa, Hisataka Suematsu, Takekazu Ishida, 10.1016/j.physc.2011.12.023, Physica C, 479, 2012, 106–110
2. Vortex States in Nano-Structured MgB₂, Yuhei Niwa, Masaru Kato, 10.1016/j.phpro.2012.03.424, Physics Procedia, 27, 2012, 116–119
3. Quasi-particle structures around a pair of half-quantum vortices in chiral p-wave superconductors, Y Niwa, M. Kato and K. Maki, 10.1088/1742-6596/400/2/022083, Journal of Physics: Conference Series, 400•2, 2012, 022083 1–4
4. Microscopic Investigation of Vortex-Vortex Interaction in Conventional Superconductors, Masaru Kato and Yuhei Niwa, 10.1088/1742-6596/400/2/022051, Journal of Physics: Conference Series, 400•2, 2012, 022051 1–4
5. Dynamics of Vortices in Nano-Structured Superconductors with Periodic Arrays of Various Antidots, David E Fujibayashi and Masaru Kato, 10.1088/1742-6596/400/2/022020, Journal of Physics: Conference Series, 400•2, 2012, 022020 1–4
6. Vortex dynamics in corbino disks: Molecular dynamics simulation with thermal effect, D.E. Fujibayashi, M. Kato, 10.1016/j.physc.2012.03.022, Physica C, 484, 2013, 94–96
7. Magnetic flux structures of finite superconducting networks, Masaru Kato and Osamu Sato, 10.1088/0953-2048/26/3/033001, Superconductors Science and Technology, 26•3, 2013, 033001 1–26
8. Appearance of Magnetization around a Pair of Half-Quantum Vortices in Chiral p-Wave Superconductors, Yuhei Niwa, Masaru Kato, and Kazumi Maki, 10.7566/JPSJ.82.034720, Journal of Physical Society of Japan, 82•3, 2013, 034720 1–10

磁性、磁性材料

1. Oximate-bridged Light-lanthanoid Ln₄Cu Complexes Showing Ferromagnetic Ln-Cu Exchange Coupling, K. Fujiwara, A. Okazawa, G. Tanaka, S. Yoshii, H. Nojiri, T. Ishida, doi:10.1016/j.cplett.2012.01.062, Chemical Physics Letters, 530, 2012, 49–54

2. Exchange Coupling in TbCu and DyCu Single-molecule Magnets and Related Lanthanide and Vanadium Analogs, T. Ishida, R. Watanabe, K. Fujiwara, A. Okazawa, N. Kojima, G. Tanaka, S. Yoshii, H. Nojiri, DOI: 10.1039/C2DT31169K, Dalton Transactions, 41, 2013, 13609–13619
3. A New Family of Trinuclear Nickel(II) Complexes as Single-Molecule Magnets, R. Biswas, Y. Ida, M. L. Baker, S. Biswas, P. Kar, H. Nojiri, T. Ishida, A. Ghosh, DOI: 10.1002/chem.201202795, Chemistry–A European Journal, 19, 2013, 3943–3953
4. Magnetic Study on Radical-Gadolinium(III) Complexes. Relationship between the Exchange Coupling and Coordination Structure, T. Ishida, R. Murakami, T. Kanetomo, H. Nojiri, 10.1016/j.poly.2013.04.004, Polyhedron, 2013
5. Spin caloritronics: Electron spins blow hot and cold, S.T.B. Goennenwein and G.E.W. Bauer, Nature Nanotechnology, 7, 2012, 145–147
6. Domain wall heat conductance in ferromagnetic wires, P. Yan and G.E.W. Bauer, Phys. Rev. Lett., 109, 2013, 087202–1 087202–5
7. 原子拡散を利用したフラット・パターンニング法による[001] L10-FePtRh 強磁性-反強磁性パターン の作製, 長谷川崇, 富岡達也, 川戸宏紀, 高橋信吾, 近藤祐治, 山根治紀, 荒川明, 石尾俊二, J. Magn. Soc. Jpn., Vol. 36, 2012, 104–108
8. Understanding magnetic properties of arrays of small FePt dots with perpendicular anisotropy, Z.J. Yan, S. Takahashi, T. Hasegawa, S. Ishio, Y. Kondo, J. Ariake, D.S. Xue, J. Magn. Mater., Vol. 324, 2012, 3737–3740
9. フラット・パターンニング法を用いて作製したL10FePtRh強磁性-反強磁性パターンにおける原子拡散幅の評価, 長谷川 崇, 石尾 俊二, 電子情報通信学会技術研究報告; 信学技報 (IEICE Technical Report), Vol. 112, No. 249, 2012, 49–52
10. レーザ加熱機構を有する局所磁気光学カー効果計測技術の開発, 中村勇希, 近藤祐治, 山川清志, 有明順, 石尾 俊二, 電子情報通信学会技術研究報告; 信学技報 (IEICE Technical Report), Vol. 112, No. 249, 2012, 31–35
11. Magnetic phase diagram and crystalline structure of polycrystalline FeMnPt films, FeMnPt多結晶薄膜の結晶構造と磁気相図, T. Hasegawa and S. Ishio, Journal of the society of materials engineering for resources of Japan (素材物性学雑誌), in press, 2013
12. Ferromagnetic-paramagnetic patterning of FePtRh films by Fe ion implantation, T. Hasegawa, Y. Kondo, H. Yamane, S. Nagamachi, and S. Ishio, IEEE Trans. Magn., in press, 2013
13. Measurement of the Josephson Effect of Heavy-Fermion Superconductor UPt3 as a Test of the Odd-Parity Order Parameter, Jun Gouchi, Akihiko Sumiyama, Gaku Motoyama, Akira Yamaguchi, Noriaki Kimura, <http://dx.doi.org/10.1143/JPSJ.81>, Journal of the Physical Society of Japan, 81, 2012, 113701 1–4

14. Universality and critical behavior at the critical endpoint in the itinerant-electron metamagnet UCoAl, K. Karube, T. Hattori, S. Kitagawa, K. Ishida, N. Kimura, and T. Komatsubara, 10.1103/PhysRevB.86.024428-1-7, PHYSICAL REVIEW B, 86, 2012, 024428 1-7
15. Thermal and Electronic Properties of Rare Earth Compounds at High Pressure, Y. Uwatoko, I. Umehara, M. Ohashi, T. Nakano and G. Oomi, Handbook on the Physics and Chemistry of Rare Earths, 42, 2012, 1-164
16. Transport and magnetic properties of fully epitaxial superconducting NbN/half-metallic Heulser alloy Co₂MnSi bilayer films, I. Shigeta, Y. Sakuraba, S. Kimura, K. Koyama, K. Watanabe, K. Takanashi, M. Hiroi, Journal of Magnetism Society of Japan, 2013, accepted
17. The crystal structure and magnetic properties of an organic verdazyl biradical, K. Iwase, H. Yamaguchi, H. Nojiri, A. Matsuo, K. Kindo, and Y. Hosokoshi, 10.1088/1742-6596/400/3/032032, Journal of Physics: Conference Series, 400•Part3, 2012, 032032 1-4
18. Magnetic Phase Transition in the Verdazyl Biradical Crystal p-BIP-V2, H. Yamaguchi, M. Tada, S. Nagata, K. Iwase, T. Shimokawa, H. Nakano, H. Nojiri, A. Matsuo, K. Kindo, and Y. Hosokoshi, 10.1088/1742-6596/400/3/032118, Journal of Physics: Conference Series, 400•Part 3, 2012, 032118 1-4
19. Crystal structure and magnetic properties of honeycomb-like lattice antiferromagnet p-BIP-V2, Hironori Yamaguchi, Shintaro Nagata, Masami Tada, Kenji Iwase, Toshio Ono, Sadafumi Nishihara, Yuko Hosokoshi, Tokuro Shimokawa, Hiroki Nakano, Hiroyuki Nojiri, Akira Matsuo Koichi Kindo, Takashi Kawakami, 10.1103/PhysRevB.87.125120, Phys. Rev.B, 87•12, 2013, 125120 1-8

生体材料

1. Micro-arc oxidation treatment to improve the hard-tissue compatibility of Ti-29Nb-13Ta-4.6Zr alloy, Tsutsumi Y, Niinomi M, Nakai M, Tsutsumi H, Doi H, Nomura N, Hanawa T, 10.1016/j.apsusc.2012.01.024, Applied Surface Science, 262, 2012, 34-38
2. Corrosion Resistance of Ti-29Nb-13Ta-4.6Zr Alloy in a Fluoride-Containing Solution, Shinji Takemoto, Masaaki Nakai, Masayuki Hattori, Masao Yoshinari, Eiji Kawada, Mitsuo Niinomi, Yutaka Oda, 10.4028/www.scientific.net/KEM.5, Key Engineering Materials, 529-530, 2013, 584-587
3. β -grain refinement of α + β -type Ti-4.5Al-6Nb-2Fe-2Mo alloy by using rare-earth-oxide precipitates, K. Ueda, S. Nakaoka and T. Narushima, doi:10.2320/matertrans.MC201207, Mater. Trans., 54 (2), 2013, 161-168

非晶質・ガラス、液体状態、準結晶

1. Influence of Laser Remelting on Tensile Properties of Nano-composite Ni-Al₂O₃ Coatings, M. Komaki, T. Miura, S. Tsuji, K. Amiya, Y. Saotome and T. Yamasaki, Materials Transactions, Vol. 53, Issue 12, 2012, 2151-2155

2. Influence of Substrate Temperature on Structure and Adhesion Strength of Fe–Cr–P–C Amorphous Coating Films Produced by Thermal Spraying Technique, M. Komaki, T. Miura, R. Kurahasi, H. Odahara, K. Amiya, Y. Saotome and T. Yamasaki, *Materials Transactions*, Vol. 53, Issue 4, 2012, 681–689

薄膜、超微粒子

1. Reactions of Copper Cluster Cations with Nitrous Oxide: Oxidation and Sequential N₂O Adsorption, S. Hirabayashi, M. Ichihashi and T. Kondow, 10.1016/j.cplett.2012.03.019, *Chem. Phys. Lett.*, 533, 2012, 15–19
2. Comparison of Adsorption Probabilities of O₂ and CO on Copper Cluster Cations and Anions, S. Hirabayashi, M. Ichihashi, Y. Kawazoe and T. Kondow, 10.1021/jp304214m, *J. Phys. Chem. A*, 116, 2012, 8799–8806
3. CO Oxidation by Copper Cluster Anions, S. Hirabayashi, Y. Kawazoe and M. Ichihashi, 10.1140/epjd/e2012–30493–5, *Eur. Phys. J. D*, 67, 2013, 35
4. Oxidation of Composition–Selected Cerium Oxide Cluster Cations by O₂, S. Hirabayashi and M. Ichihashi, 10.1016/j.cplett.2013.02.019, *Chem. Phys. Lett.*, 564, 2013, 16–20
5. Nanospace Charge Polarization of Monatomic–Layered Platinum Cluster Disk Constructed on Silicon(111)–7x7 Surface, H. Yasumatsu, P. Murugan and Y. Kawazoe, 10.1002/pssb.201100563, *Phy.Status Solidi B*, 249, 2012, 1193–1198
6. Two–Dimensional to Three–Dimensional Transition of Tungsten Clusters Anchored on Graphite Surface, T. Hayakawa and H. Yasumatsu, 10.1007/s11051–012–1022–2, *J. Nanoparticle Res.*, 14, 2012, 1022
7. Oxidation Processes of Chromium Dimer and Trimer Cations in an Ion Trap, T. Ito, K. Egashira, K. Tsukiyama and A. Terasaki, 10.1016/j.cplett.2012.04.040, *Chem. Phys. Lett.*, 538, 2012, 19–23
8. Spatial distribution of ions in a linear octopole radio–frequency ion trap in the space–charge limit, T. Majima, G. Santambrogio, C. Bartels, A. Terasaki, T. Kondow, J. Meinen and T. Leisner, 10.1103/PhysRevA.85.053414, *Phys. Rev. A*, 85, 2012, 053414 1–7
9. Stress state analysis of stress engineered BaTiO₃ thin film by LaNiO₃ bottom electrode, Kohei MURAKOSHI, Naonori SAKAMOTO, TOMOYA OHNO, TAKANORI KIGUCHI, TAKESHI MATSUDA, TOYOHICO KONNO, NAOKI WAKIYA and HISAO SUZUKI, *Journal of the Ceramic Society of JAPAN*, 121[3], 2013, 273–277

精製、溶解、凝固、接合、相図

1. Influence of oxygen impurity on containerless solidification of quasicrystalline–forming Zr₈₀Pt₂₀ alloy, Takeshi Harada, Akitoshi Mizuno and Masahito Watanabe, <http://dx.doi.org/10.1557/opl.20>, *MRS Online Proceedings*, Vol.1528, 2013

結晶成長、欠陥

1. The impact of pressure and temperature on growth rate and layer uniformity in the sublimation growth of AlN crystals, B. Gao, S. Nakano, K. Kakimoto, Journal of Crystal Growth, Volume 338, Issue 1, 2012, 69–74
2. Numerical analysis of the velocity of SiC growth by the top seeding method, F. Inui, B. Gao, S. Nakano, K. Kakimoto, Journal of Crystal Growth, Volume 348, Issue 1, 2012, 71–74
3. Thermodynamical analysis of polytype stability during PVT growth of SiC using 2D nucleation theory, T. Shiramomo, B. Gao, F. Mercier, S. Nishizawa, S. Nakano, Y. Kangawa, K. Kakimoto, Journal of Crystal Growth, Volume 352, Issue 1, 2012, 177–180
4. Formation of a carbon nanoribbon by spontaneous collapse of a carbon nanotube grown from a γ -Fe nanoparticle via an origami mechanism, Hideo Kohno, Takuya Komine, Takayuki Hasegawa, Hirohiko Niioka, and Satoshi Ichikawa, Nanoscale, 5, 2013, 570–573
5. Local current conduction due to edge dislocations in deformed GaN studied by scanning spreading resistance microscopy, Takashi Yokoyama, Yasushi Kamimura, Keiichi Edagawa, and Ichiro Yonenaga, 10.1051/epjap/2012120318, The European Physical Journal Applied Physics, Vol. 61, 2013, 10102
6. Czochralski growth techniques of germanium crystals grown from a melt covered partially or fully by liquid B₂O₃, T.Taishi, Y.Hashimoto, H.Ise, Y.Murao, T.Ohsawa and I.Yonenaga, J. Cryst. Growth, 360, 2012, 47–51
7. Oxygen in Ge crystals grown by the B₂O₃ encapsulated Czochralski method, K.Inoue, T.Taishi, Y.Tokumoto, Y.Murao, K.Kutsukake, Y.Ohno, M.Suezawa and I.Yonenaga, Physica B, 407, 2012, 2932–2934
8. Interstitial oxygen behavior for thermal double donor formation in germanium : Infrared absorption studies, K.Inoue, T.Taishi, Y.Tokumoto, Y.Murao, K.Kutsukake, Y.Ohno, M.Suezawa and I.Yonenaga, J. Appl. Phys., 113, 2013, 073501 1–5
9. Gas-source MBE growth of strain-relaxed Si_{1-x}C_x on Si(100) substrates, K. Arimoto, S. Sakai, H. Furukawa, J. Yamanaka, K. Nakagawa, N. Usami, Y. Hoshi, K. Sawano, Y. Shiraki, 10.1016/j.jcrysgr.2012.12.152, Journal of Crystal Growth, in press, 2013

結晶構造(X線、電子線回折)

1. Evaluation of compressive deformation behavior of Ze₅₅Al₁₀Ni₅Cu₃₀ bulk metallic glass containing ZeC particles by synchrotron X-ray diffraction, H. Suzuki, J. Saida, T. Shobu, J. Katsuyama, H. Kato, M. Imafuku, S. Sato, Scripta Materialia, 66, 2012, 801–804
2. Enhancement of athermal martensitic transformation in Ti–10V–2Fe–3Al alloy due to high-speed hot deformation, T. Akanuma, H. Matsumoto, S. Sato, A. Chiba, I. Inagaki, Y. Shirai, T. Maeda, Scripta Materialia, 67, 2012, 21–24

3. X-ray fluorescence holography, K. Hayashi, N. Happo, S. Hosokawa, W. Hu, and T. Matsushita, 10.1088/0953-8984/24/9/093201, J. Phys.: Condens. Matter, (Topical Review), 24, 2012, 093201 1-15
4. Extent and feature of lattice distortions around Ga impurity atoms in InSb single crystal, S. Hosokawa, N. Happo, T. Ozaki, H. Ikemoto, T. Shishido, and K. Hayashi, 10.1103/PhysRevB.87.094104, Phys. Rev. B, 87, 2013, 094104 1-8
5. Radar-enabled recovery of the Sutter's Mill meteorite, a carbonaceous chondrite regolith breccia, Jenniskens P., Fries M. D., Yin Q-Z., Zolensky M., Krot A. N., Sandford S. A., Sears D., Beauford R., Ebel D. S., Friedrich J. M., Nagashima K., Wimpenny J., Yamakawa A., Nishiizumi K., Hamajima Y., Caffee M. W., Welten K. C., Laubenstein M., Davis A. M., 10.1126/science.1227163, Science, Vol. 338, No. 6114, 2012, 1583-1587
6. Eclogitic clasts with omphacite and pyrope-rich garnet in the NWA 801 CR2 chondrite, Kimura M., Sugiura N., Mikouchi T., Hirajima T., Hiyagon H. and Takehana Y., 10.2138/am.2013.4192, American Mineralogist, Vol. 98, No. 2-3, 2013, 387-393

電氣的、光学的性質

1. Enhanced carrier extraction from Ge quantum dots in Si solar cells under strong photoexcitation, T. Tayagaki, N. Usami, W. Pan, Y. Hoshi, K. Ooi, and Y. Kanemitsu, <http://dx.doi.org/10.1063/1.4756>, Appl. Phys. Lett, 101, 2012, 133905 1-4
2. Influence of thermal annealing on the carrier extraction in Ge/Si quantum dot solar cells, T. Tayagaki, N. Usami, and Y. Kanemitsu, <http://dx.doi.org/10.1143/JJAP.5>, Jpn. J. Appl. Phys., 51, 2013, 10NE24 1-4

照射、原子力(材料)

1. Effect of Yttrium on Dynamic Strain Aging of Vanadium Alloys, Takeshi Miyazawa, Takuya Nagasaka, Yoshimitsu Hishinuma, Takeo Muroga, Yanfen Li, Yuhki Satoh, Sawoong Kim, Hiroaki Abe, Journal of Nuclear Materials, 2013

照射、原子力(アクチノイド)

1. Linear Trinuclear Zn(II)-Ce(III)-Zn(II) Complex which Behaves as Single-molecule Magnet, S. Hino, M. Maeda, K. Yamashita, Y. Kataoka, M. Nakano, T. Yamamura, H. Nojiri, M. Kofu, O. Yamamuro, T. Kajiwar*, 10.1039/c2dt32812g, Dalton Trans., 42, 2013, 2683-2686
2. Luminescent Single-molecule Magnet: Observation of Magnetic Anisotropy Using Emission as Probe, K. Yamashita, R. Miyazaki, Y. Kataoka, T. Nakanishi, Y. Hasegawa,* M. Nakano, T. Yamamura, T. Kajiwar*, 10.1039/c2dt32785f, Dalton Trans., 42, 2013, 1987-1990
3. Correlation between slow magnetic relaxation and coordination structures of family of linear trinuclear Zn(II)-Ln(III)-Zn(II) complexes (Ln = Tb, Dy, Ho, Er, Tm, and Yb), M. Maeda, S. Hino, K. Yamashita, Y. Kataoka, M. Nakano, T. Yamamura, T. Kajiwar*, 10.1039/C2DT31399E, Dalton Trans., 41, 2012, 13640-13648

4. Multi-Path Magnetic Relaxation of Mono-Dysprosium(III) Single-Molecule Magnet with Extremely High Barrier, A. Watanabe, A. Yamashita, M. Nakano,* T. Yamamura, T. Kajiwara*, 10.1002/chem.201003538, Chem. Eur. J., 17, 2011, 7428–7432
5. Wheel-shaped ErIII ZnII3 Single-Molecule Magnet: A Macrocyclic Approach to Designing Magnetic Anisotropy, A. Yamashita, A. Watanabe, S. Akine, T. Nabeshima,* M. Nakano, T. Yamamura, T. Kajiwara*, 10.1002/anie.201008180, Angew. Chem. Int. Ed., 50, 2011, 4016–4019

分光、分析、NMR、メスbauer

1. Two-Photon Laser-Induced Fluorescence Spectra of Argon in a Grimm-Style Glow Discharge Tube, H. Matsuta and K. Kitagawa, Spectroscopy Letters, 45, 2012, 13–13
2. 減圧レーザー誘起プラズマ発光分析法を用いたFe基合金中Niの定量分析, 阿部千景、我妻和明, 鉄と鋼, 98, 2, 2012, 63–68
3. Deviation from Boltzmann Distribution in Excited Energy Levels of Singly-ionized Iron in an Argon Glow Discharge Plasma for Atomic Emission Spectrometry, L. Zhang, S. Kashiwakura, K. Wagatsuma, 10.1016/j.sab.2011.12.005, Spectrochimica Acta Part B, 67, 2012, 24–31
4. 黒鉛炉原子吸光法における測定回数による黒鉛原子化路の寿命および原子化プロセスへの影響, 芦野哲也、島袋治樹、我妻和明, 金属学会誌, 76(2), 2012, 129–133
5. Surface-nitriding treatment of steels using microwave-induced nitrogen plasma at atmospheric pressure, S. Sato, Y. Arai, N. Yamashita A. Kojyo, K. Komada, N. Ohtsu, Y. Okamoto, K. Wagatsuma, Appl. Surf. Sci., 258, 2012, 7574–7580
6. Excitation Process in Introduction of Bias Current to a Radio-frequency Glow Discharge Plasma Evaluated from Boltzmann Plots of Iron Atomic and Ionic Spectral Lines, K. Wagatsuma, R. Oka, S. Urushibata, Analytical Sciences, 28, 8, 2012, 759–766
7. Determination of Minor Alloyed Elements in Steel Samples in Radio-frequency Glow Discharge Plasma Optical Emission Spectrometry Associated with Pulsed Bias-Current Modulation Technique, S. Urushibata, K. Wagatsuma, ISIJ International, 52, 9, 2012, 1622–1627
8. Experimental calibration curve for quantitative XPS analysis constructed from in situ fractured polycrystalline manganese silicide surfaces, N. Ohtsu, M. Oku, T. Shishido, K. Wagatsuma, Surf. Interface Anal., 44, 2012, 993–996
9. Microstructures and mechanical properties of biomedical Co–29Cr–6Mo–0.14N alloys processed by hot rolling, M. Mori, K. Yamanaka, S. Sato, K. Wagatsuma, A. Chiba, Metallurgical and Materials Transactions A, 43A, 2012, 3108–3119
10. Comparative Studies on the Excitation Mechanism of Fe II Lines in Low Pressure Laser-Induced Plasma of Argon and Neon, L. Zhang, S. Kashiwakura, K. Wagatsuma, Spectroscopy Letters, 16, 2013, 1–12

11. Dependence of core-level XPS spectra on iron silicide phase, N. Ohtsu, M. Oku, K. Satoh, K. Wagatsuma, 10.1016/j.apsusc.2012.09.176/, Appl. Surf. Sci., 264, 1, 2013, 219–224
12. New Raman spectroscopic data of the Almahata Sitta meteorite, Kaliwoda M., Hochleitner R., Hoffmann V. H., Mikouchi T., Gigler A. M. and Schmahl W. W., 10.1080/00387010.2011.610423, Spectroscopy Letters, Vol. 46, No. 2, 2013, 141–146
13. U–Pb isotopic systematics of shock-loaded and annealed baddeleyite: Implications for crystallization ages of Martian meteorite shergottites, Niihara T., Kaiden H., Misawa K., Sekine T. and Mikouchi T., 10.1016/j.epsl.2012.06.002, Earth and Planetary Science Letters, Vol. 341–344, 2012, 195–210
14. Build-up processes of an optical cavity enclosing an absorbent thin film: Computational study by the CIP method, K. Egashira, A. Terasaki and T. Kondow, 10.1140/epjd/e2012-20587-5, Eur. Phys. J. D, 66, 2012, 92 1–8

計算材料科学

1. Fast convergence to equilibrium for long-chain polymer melts using a MD/continuum hybrid method, Yasuhiro Senda, Miyuki Fujio, Shuji Shimamura, Janne Blomqvist, and Risto M Nieminen, 10.1063/1.4759036, Journal of Chemical Physics, Vol. 137, 2012, 154115 1–6
2. Segregation Diagram of a Mixture of Particles with Different Sizes and Densities, Shuji Shimamura, Takanori Takahira, Shota Suga, Hajime Tamura and Yasuhiro Senda, 10.4028/www.scientific.net/AMR.5, Advanced Materials Research, Vol. 508, 2012, 155–159
3. Model calculation of the pore-size and porosity dependences of bulk moduli in nanoporous materials, Iwan Sumirat and Shuji Shimamura, 10.1007/s10934-011-9558-6, Journal of Porous Materials, Vol. 19, 2012, 1009–1014