

Tomoharu Tokunaga

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108
papers

1,995
citations

20
h-index

41
g-index

123
ext. papers

2,256
ext. citations

3.9
avg, IF

4.67
L-index

#	Paper	IF	Citations
108	Atomic origins of the high catalytic activity of nanoporous gold. <i>Nature Materials</i> , 2012 , 11, 775-80	27	687
107	Production of aluminum-matrix carbon nanotube composite using high pressure torsion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 490, 300-304	5.3	142
106	Atomic observation of catalysis-induced nanopore coarsening of nanoporous gold. <i>Nano Letters</i> , 2014 , 14, 1172-7	11.5	100
105	Microstructure and mechanical properties of aluminum fullerene composite fabricated by high pressure torsion. <i>Scripta Materialia</i> , 2008 , 58, 735-738	5.6	69
104	Synthesis of zirconium oxynitride in air under DC electric fields. <i>Applied Physics Letters</i> , 2016 , 109, 083104	3.4	39
103	Growth and structure analysis of tungsten oxide nanorods using environmental TEM. <i>Nanoscale Research Letters</i> , 2012 , 7, 85	5	33
102	Formation of grain boundary second phase in BaTiO ₃ polycrystal under a high DC electric field at elevated temperatures. <i>Journal of the Ceramic Society of Japan</i> , 2016 , 124, 388-392	1	32
101	Microstructural analysis of thermal degradation of palladium-coated niobium membrane. <i>Journal of Alloys and Compounds</i> , 2013 , 573, 192-197	5.7	29
100	Fabrication and Characterization of Supersaturated Al-Mg Alloys by Severe Plastic Deformation and Their Mechanical Properties. <i>Materials Transactions</i> , 2009 , 50, 76-81	1.3	28
99	Preparation of Au/Pd Bimetallic Nanoparticles by a Microwave-Induced Plasma in Liquid Process. <i>Bulletin of the Chemical Society of Japan</i> , 2017 , 90, 279-285	5.1	27
98	Au/Cu Bimetallic Nanoparticles via Double-Target Sputtering onto a Liquid Polymer. <i>Langmuir</i> , 2017 , 33, 12389-12397	4	26
97	Porous ZnV ₂ O ₄ Nanowire for Stable and High-Rate Lithium-Ion Battery Anodes. <i>ACS Applied Nano Materials</i> , 2019 , 2, 4247-4256	5.6	26
96	Water transport phenomena through membranes consisting of vertically-aligned double-walled carbon nanotube array. <i>Carbon</i> , 2017 , 120, 358-365	10.4	25
95	Double target sputtering into liquid: A new approach for preparation of Ag ₂ Au alloy nanoparticles. <i>Materials Letters</i> , 2016 , 171, 75-78	3.3	25
94	Double-wall TiO ₂ nanotube arrays: enhanced photocatalytic activity and in situ TEM observations at high temperature. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 19924-32	9.5	24
93	Behavior of Cu nanoparticles ink under reductive calcination for fabrication of Cu conductive film. <i>Thin Solid Films</i> , 2012 , 520, 2789-2793	2.2	23
92	Electric current-controlled synthesis of BaTiO ₃ . <i>Journal of the American Ceramic Society</i> , 2017 , 100, 3843-3850	21	21

91	Selective Reduction Mechanism of Graphene Oxide Driven by the Photon Mode the Thermal Mode. <i>ACS Nano</i> , 2019 , 13, 10103-10112	16.7	21
90	Synthesis and characterization of metal-filled carbon nanotubes by microwave plasma chemical vapor deposition. <i>Diamond and Related Materials</i> , 2005 , 14, 790-793	3.5	21
89	Enhancement of sintering rates in BaTiO ₃ by controlling of DC electric current. <i>Journal of the Ceramic Society of Japan</i> , 2015 , 123, 465-468	1	20
88	Plasma induced tungsten doping of TiO ₂ particles for enhancement of photocatalysis under visible light. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 24556-9	3.6	19
87	Corn-shape carbon nanofibers with dense graphite synthesized by microwave plasma-enhanced chemical vapor deposition. <i>Applied Physics Letters</i> , 2004 , 84, 2886-2888	3.4	19
86	Topologically immobilized catalysis centre for long-term stable carbon dioxide reforming of methane. <i>Chemical Science</i> , 2019 , 10, 3701-3705	9.4	19
85	Environment-Sensitive Thermal Coarsening of Nanoporous Gold. <i>Materials Transactions</i> , 2015 , 56, 468-472	18	18
84	Cobalt nanorods fully encapsulated in carbon nanotube and magnetization measurements by off-axis electron holography. <i>Applied Physics Letters</i> , 2006 , 88, 243118	3.4	18
83	Microstructure of metal-filled carbon nanotubes. <i>Journal of Electron Microscopy</i> , 2004 , 53, 149-55		18
82	Consolidation of undoped, monoclinic zirconia polycrystals by flash sintering. <i>Journal of the American Ceramic Society</i> , 2017 , 100, 3851-3857	3.8	17
81	Size-Tunable Alumina-Encapsulated Sn-Based Phase Change Materials for Thermal Energy Storage. <i>ACS Applied Nano Materials</i> , 2019 , 2, 3752-3760	5.6	17
80	Formation of secondary phase at grain boundary of flash-sintered BaTiO ₃ . <i>Microscopy (Oxford, England)</i> , 2014 , 63 Suppl 1, i19-i20	1.3	16
79	Intergranular amorphous films formed by DC electric field in pure zirconia. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 3282-3287	3.8	15
78	Earth-Abundant and Durable Nanoporous Catalyst for Exhaust-Gas Conversion. <i>Advanced Functional Materials</i> , 2016 , 26, 1609-1616	15.6	15
77	Nanophase-separated NiNb as an automobile exhaust catalyst. <i>Chemical Science</i> , 2017 , 8, 3374-3378	9.4	14
76	One-Minute Joule Annealing Enhances the Thermoelectric Properties of Carbon Nanotube Yarns via the Formation of Graphene at the Interface. <i>ACS Applied Energy Materials</i> , 2019 , 2, 7700-7708	6.1	14
75	Matrix Sputtering into Liquid Mercaptan: From Blue-Emitting Copper Nanoclusters to Red-Emitting Copper Sulfide Nanoclusters. <i>Langmuir</i> , 2016 , 32, 12159-12165	4	14
74	Encapsulation of Co and Pd multi-metal nanowires inside multiwalled carbon nanotubes by microwave plasma chemical vapor deposition. <i>Diamond and Related Materials</i> , 2007 , 16, 1200-1203	3.5	13

73	Blue photo luminescence from 3 mol%Y ₂ O ₃ -doped ZrO ₂ polycrystals sintered by flash sintering under an alternating current electric field. <i>Journal of the European Ceramic Society</i> , 2020 , 40, 2072-2076	6	13
72	Preparation and Growth Mechanism of Pt/Cu Alloy Nanoparticles by Sputter Deposition onto a Liquid Polymer. <i>Langmuir</i> , 2019 , 35, 8418-8427	4	11
71	Structural Control Parameters for Formation of Single-Crystalline Sn Nanorods in Organic Phase. <i>Crystal Growth and Design</i> , 2017 , 17, 4554-4562	3.5	11
70	Temperature distributions of electron beam-irradiated samples by scanning electron microscopy. <i>Journal of Microscopy</i> , 2012 , 248, 228-33	1.9	11
69	Formation of wedge-shaped carbon film by chemical vapor deposition method and observation using transmission electron microscopy. <i>Scripta Materialia</i> , 2005 , 52, 1205-1209	5.6	11
68	Green Synthesis of Size-Tunable Iron Oxides and Iron Nanoparticles in a Salt Matrix. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 17697-17705	8.3	10
67	Ligand free green plasma-in-liquid synthesis of Au/Ag alloy nanoparticles. <i>New Journal of Chemistry</i> , 2018 , 42, 5680-5687	3.6	10
66	In-Situ TEM Study of a Nanoporous NiCo Catalyst Used for the Dry Reforming of Methane. <i>Metals</i> , 2017 , 7, 406	2.3	10
65	In-situ TEM studies of the sintering behavior of copper nanoparticles covered by biopolymer nanoskin. <i>Journal of Electron Microscopy</i> , 2010 , 59 Suppl 1, S75-80		10
64	Highly Correlated Size and Composition of Pt/Au Alloy Nanoparticles via Magnetron Sputtering onto Liquid. <i>Langmuir</i> , 2020 , 36, 3004-3015	4	9
63	Growth and Optical Properties of Rectangular Hollow Tube TiO ₂ Crystals with Rutile-Type Structure. <i>Crystal Growth and Design</i> , 2011 , 11, 4427-4432	3.5	9
62	Encapsulation of segmented PdCo nanocomposites into vertically aligned carbon nanotubes by plasma-hydrogen-induced demixing. <i>Applied Physics Letters</i> , 2007 , 90, 133116	3.4	9
61	Suppression of nitridation of yttria-doped zirconia during flash sintering. <i>Journal of the American Ceramic Society</i> , 2020 , 103, 3002-3007	3.8	8
60	Small Nanosized Oxygen-Deficient Tungsten Oxide Particles: Mechanistic Investigation with Controlled Plasma Generation in Water for Their Preparation. <i>ACS Omega</i> , 2017 , 2, 5104-5110	3.9	8
59	Synthesis and characterization of carbon nanotube grown on flexible and conducting carbon fiber sheet for field emitter. <i>Diamond and Related Materials</i> , 2009 , 18, 341-344	3.5	8
58	Flash sintering for BaTiO ₃ with square alternating current field including zero-field duration. <i>Journal of the Ceramic Society of Japan</i> , 2020 , 128, 1018-1023	1	8
57	Near complete densification of flash sintered 8YSZ: controlled shrinkage rate effects. <i>Journal of the European Ceramic Society</i> , 2021 , 41, 4567-4571	6	8
56	Nanoporous Nickel Composite Catalyst for the Dry Reforming of Methane. <i>ACS Omega</i> , 2018 , 3, 16651-16657	16.657	8

55	Synthesis of composition-tunable PdCu alloy nanoparticles by double target sputtering. <i>New Journal of Chemistry</i> , 2020 , 44, 4704-4712	3.6	7
54	Titanium oxide nanoparticle dispersions in a liquid monomer and solid polymer resins prepared by sputtering. <i>New Journal of Chemistry</i> , 2016 , 40, 9337-9343	3.6	7
53	Influence of surface structure modifications on the growth of carbon-nanotubes on the SiC) surfaces. <i>Surface Science</i> , 2006 , 600, 4077-4080	1.8	7
52	Microstructure Analyses of Metal-Filled Carbon Nanotubes Synthesized by Microwave Plasma-Enhanced Chemical Vapor Deposition. <i>IEEE Nanotechnology Magazine</i> , 2006 , 5, 485-490	2.6	7
51	Sputter Deposition toward Short Cationic Thiolated Fluorescent Gold Nanoclusters: Investigation of Their Unique Structural and Photophysical Characteristics Using High-Performance Liquid Chromatography. <i>Langmuir</i> , 2018 , 34, 4024-4030	4	6
50	Hard-templating synthesis of macroporous platinum microballs (MPtM). <i>Materials Letters</i> , 2016 , 164, 488-492	3.3	6
49	Rapid sintering of 3 mol % Y ₂ O ₃ -doped ZrO ₂ by a combined rapid furnace heating and shrinkage-controlled flash sintering protocol. <i>Journal of the Ceramic Society of Japan</i> , 2021 , 129, 551-554 ¹		6
48	Technique to control specimen electric current during a flash state with alternating current electric fields. <i>Journal of the Ceramic Society of Japan</i> , 2019 , 127, 849-851	1	5
47	In Situ Transmission Electron Microscopic Observation of Double-wall TiO ₂ Nanotube Arrays at High Temperature. <i>Chemistry Letters</i> , 2014 , 43, 1514-1516	1.7	5
46	High temperature in-situ observations of multi-segmented metal nanowires encapsulated within carbon nanotubes by in-situ filling technique. <i>Nanoscale Research Letters</i> , 2012 , 7, 448	5	5
45	Observation of microstructural changes in polymer-coated Kompeito-type platinum particles by in situ heating TEM. <i>Journal of Nanoscience and Nanotechnology</i> , 2012 , 12, 2612-6	1.3	5
44	Facile fabrication and structural studies of filtered Ge nanowires from aged Al ₇₅ Ge alloy. <i>Scripta Materialia</i> , 2007 , 57, 281-284	5.6	5
43	Demixing of Solid-Soluted Co-Pd Binary Alloy Induced by Microwave Plasma Hydrogen Irradiation Technique. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, L860-L863	1.4	5
42	Directly determining the polarity of WC grains in WC ₁₂ wt%Co alloy by ABF-STEM. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017 , 62, 9-13	4.1	4
41	Oxidation kinetics of single crystal silicon carbide using electron microscopy. <i>Journal of the Ceramic Society of Japan</i> , 2012 , 120, 181-185	1	4
40	Synthesis of corn-shape carbon nanofibers on Si and Mo substrates by bias-enhanced microwave plasma chemical vapor deposition. <i>Diamond and Related Materials</i> , 2004 , 13, 1198-1202	3.5	4
39	Cross-sectional Area Dependency of Shrinkages and Grain Sizes of Flash-sintered 3 mol%Y ₂ O ₃ /ZrO ₂ Polycrystals with a Circular Truncated Cone-shape at High Frequency Alternating Electric Current Fields. <i>Funtai Oyobi Fumatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy</i> , 2021 , 68, 487-493	0.2	4
38	Shrinkage rate control during a flash state by current-ramping for 3 mol% Y ₂ O ₃ -doped ZrO ₂ polycrystals. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 4960-4967	3.8	4

37	Direct observation of B-site ordering in LSAT: (La _{0.3} Sr _{0.7})(Al _{0.65} Ta _{0.35})O ₃ single crystal. <i>Applied Physics Letters</i> , 2016 , 108, 251905	3.4	4
36	Removal of carbon contamination in ETEM by introducing Ar during electron beam irradiation. <i>Journal of Microscopy</i> , 2019 , 273, 46-52	1.9	4
35	In situ observation of carbon nanotube yarn during voltage application. <i>Micron</i> , 2015 , 74, 30-4	2.3	3
34	Characterization of oxide scales thermally formed on single-crystal silicon carbide. <i>Journal of Electron Microscopy</i> , 2010 , 59 Suppl 1, S123-7		3
33	Growth and Nanoscale Magnetic Properties of Ferromagnetic Nanowire Encapsulated Inside Carbon Nanotubes. <i>IEEE Transactions on Magnetics</i> , 2009 , 45, 2488-2491	2	3
32	Characterization of transport properties of multiwalled carbon nanotube networks by microwave plasma chemical vapor deposition. <i>Diamond and Related Materials</i> , 2006 , 15, 1138-1142	3.5	3
31	Anelasticity induced by AC flash processing of cubic zirconia. <i>Acta Materialia</i> , 2022 , 227, 117704	8.4	3
30	Low-Temperature Fabrication of Ion-Induced Ge Nanostructures: Effect of Simultaneous Al Supply. <i>IEICE Transactions on Electronics</i> , 2009 , E92-C, 1417-1420	0.4	3
29	Crystalline boron monosulfide nanosheets with tunable bandgaps. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 24631-24640	13	3
28	Methane decomposition for hydrogen production by catalytic activity of carbon black under low flow rate conditions. <i>Journal of the Ceramic Society of Japan</i> , 2017 , 125, 185-189	1	2
27	Low-Temperature Fabrication of Germanium Nanostructures by Ion Irradiation: Effect of Supplied Particle Species. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 01AB05	1.4	2
26	A method for accurate temperature measurement using infrared thermal camera. <i>Journal of Electron Microscopy</i> , 2012 , 61, 223-7		2
25	Characterization of microstructures of thermal oxide scales on silicon carbide using transmission electron microscopy. <i>Journal of the Ceramic Society of Japan</i> , 2012 , 120, 64-68	1	2
24	Hopping carrier mobilities and thermoelectric properties of oxide materials with perovskite-related structure		2
23	Microstructure and local magnetic induction of segmented and alloyed Pd/Co nanocomposites encapsulated inside vertically aligned multiwalled carbon nanotubes. <i>Diamond and Related Materials</i> , 2008 , 17, 1525-1528	3.5	2
22	Power Dissipation Behaviors during SCF-sintering for 8 mol% Y ₂ O ₃ -doped ZrO ₂ . <i>Funtai Oyobi Fumatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy</i> , 2021 , 68, 482-486	0.2	2
21	Constant shrinkage rate control during a flash event for 8 mol %Y ₂ O ₃ -doped ZrO ₂ polycrystals. <i>Journal of the Ceramic Society of Japan</i> , 2021 , 129, 204-207	1	2
20	Blue photoluminescence at room temperature from Y ₂ O ₃ -doped ZrO ₂ polycrystals sintered by flash sintering. <i>Applied Physics Express</i> , 2020 , 13, 035506	2.4	1

19	H ₂ production from methane decomposition by fullerene at low temperature. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 14347-14353	6.7	1
18	Fabrication of tin-filled carbon nanofibres by microwave plasma vapour deposition and their in situ heating observation by environmental transmission electron microscopy. <i>Nanoscale Research Letters</i> , 2013 , 8, 302	5	1
17	Improved properties of Carbon nanotube yarn spun from dense and long carbon nanotube forest 2015 ,		1
16	Growth of rectangular hollow tube crystals with rutile-type structure in supercritical fluids. <i>Journal of Physics: Conference Series</i> , 2014 , 500, 022007	0.3	1
15	Microstructure characterization of defects in cubic silicon carbide using transmission electron microscopy. <i>Microscopy and Microanalysis</i> , 2013 , 19 Suppl 5, 119-22	0.5	1
14	Direct growth of horizontally aligned carbon nanotubes between electrodes and its application to field-effect transistors. <i>Journal of Nanoscience and Nanotechnology</i> , 2011 , 11, 11011-4	1.3	1
13	Fabrication of Ge nanoneedles by ion-irradiation method. <i>Surface and Coatings Technology</i> , 2011 , 206, 812-815	4.4	1
12	Stacking Faults around the Hetero-Interface Induced by 6H-SiC Polytype Transformation on 3C-SiC with Solution Growth. <i>Materials Science Forum</i> , 2010 , 645-648, 363-366	0.4	1
11	Direct growth of horizontally aligned carbon nanotubes between electrodes and its application to field-effect transistors 2010 ,		1
10	In-situ TEM observation of internal metal inside metal filled carbon fiber. <i>Diamond and Related Materials</i> , 2011 , 20, 210-212	3.5	1
9	Alginate-Stabilized Gold Nanoparticles Prepared Using the Microwave-Induced Plasma-in-Liquid Process with Long-Term Storage Stability for Potential Biomedical Applications.. <i>ACS Omega</i> , 2022 , 7, 6238-6247	3.9	1
8	In situ TEM observation of liquid-state Sn nanoparticles vanishing in a SiO ₂ structure: a potential synthetic tool for controllable morphology evolution from core-shell to yolk-shell and hollow structures. <i>Nanoscale Advances</i> , 2020 , 2, 1456-1464	5.1	1
7	Surface precipitates formed on annealed LSAT (001) single crystal. <i>Microscopy (Oxford, England)</i> , 2014 , 63 Suppl 1, i20	1.3	
6	Microstructural Characterization of Epitaxial Cubic Silicon Carbide Using Transmission Electron Microscopy. <i>Materials Science Forum</i> , 2010 , 645-648, 379-382	0.4	
5	B-site Ordered Atomic Structure in LSAT: (La _{0.3} Sr _{0.7})(Al _{0.65} Ta _{0.35})O ₃ Single Crystal. <i>Materia Japan</i> , 2019 , 58, 93-93	0.1	
4	Low-Temperature Fabrication of Germanium Nanostructures by Ion Irradiation: Effect of Supplied Particle Species. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 01AB05	1.4	
3	Anisotropic Growth of Copper Nanorods Mediated by Cl Ions.. <i>ACS Omega</i> , 2022 , 7, 7414-7420	3.9	
2	A first attempt of automated shrinkage-rate control flash sintering using a current profile without feedback of shrinkage behavior for 8 mol %Y ₂ O ₃ -doped ZrO ₂ . <i>Journal of the Ceramic Society of Japan</i> , 2022 , 130, 327-330	1	

- 1 Effect of electron beam irradiation in gas atmosphere during ETEM.. *Micron*, **2022**, 158, 103289 2.3