Tomoharu Tokunaga

List of Publications by Year in descending order

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		279701	214721
122	2,536	23	47
papers	citations	h-index	g-index
123	123	123	3225
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Atomic origins of the high catalytic activity of nanoporous gold. Nature Materials, 2012, 11, 775-780.	13.3	803
2	Production of aluminum-matrix carbon nanotube composite using high pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 490, 300-304.	2.6	164
3	Atomic Observation of Catalysis-Induced Nanopore Coarsening of Nanoporous Gold. Nano Letters, 2014, 14, 1172-1177.	4.5	109
4	Microstructure and mechanical properties of aluminum–fullerene composite fabricated by high pressure torsion. Scripta Materialia, 2008, 58, 735-738.	2.6	78
5	Synthesis of zirconium oxynitride in air under DC electric fields. Applied Physics Letters, 2016, 109, .	1.5	56
6	Growth and structure analysis of tungsten oxide nanorods using environmental TEM. Nanoscale Research Letters, 2012, 7, 85.	3.1	43
7	Formation of grain boundary second phase in BaTiO ₃ polycrystal under a high DC electric field at elevated temperatures. Journal of the Ceramic Society of Japan, 2016, 124, 388-392.	0.5	41
8	Porous ZnV ₂ O ₄ Nanowire for Stable and High-Rate Lithium-Ion Battery Anodes. ACS Applied Nano Materials, 2019, 2, 4247-4256.	2.4	41
9	Electric currentâ€controlled synthesis of BaTiO ₃ . Journal of the American Ceramic Society, 2017, 100, 3843-3850.	1.9	35
10	Enhancement of sintering rates in BaTiO ₃ by controlling of DC electric current. Journal of the Ceramic Society of Japan, 2015, 123, 465-468.	0.5	34
11	Fabrication and Characterization of Supersaturated Al-Mg Alloys by Severe Plastic Deformation and Their Mechanical Properties. Materials Transactions, 2009, 50, 76-81.	0.4	33
12	Au/Cu Bimetallic Nanoparticles via Double-Target Sputtering onto a Liquid Polymer. Langmuir, 2017, 33, 12389-12397.	1.6	33
13	Microstructural analysis of thermal degradation of palladium-coated niobium membrane. Journal of Alloys and Compounds, 2013, 573, 192-197.	2.8	32
14	Water transport phenomena through membranes consisting of vertically-aligned double-walled carbon nanotube array. Carbon, 2017, 120, 358-365.	5.4	31
15	Preparation of Au/Pd Bimetallic Nanoparticles by a Microwave-Induced Plasma in Liquid Process. Bulletin of the Chemical Society of Japan, 2017, 90, 279-285.	2.0	31
16	Double target sputtering into liquid: A new approach for preparation of Ag–Au alloy nanoparticles. Materials Letters, 2016, 171, 75-78.	1.3	30
17	Selective Reduction Mechanism of Graphene Oxide Driven by the Photon Mode <i>versus</i> the Thermal Mode. ACS Nano, 2019, 13, 10103-10112.	7.3	30
18	Double-Wall TiO ₂ Nanotube Arrays: Enhanced Photocatalytic Activity and <i>In Situ</i> TEM Observations at High Temperature. ACS Applied Materials & Interfaces, 2014, 6, 19924-19932.	4.0	28

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19	Topologically immobilized catalysis centre for long-term stable carbon dioxide reforming of methane. Chemical Science, 2019, 10, 3701-3705.	3.7	27
20	Blue photo luminescence from 3 mol%Y2O3-doped ZrO2 polycrystals sintered by flash sintering under an alternating current electric field. Journal of the European Ceramic Society, 2020, 40, 2072-2076.	2.8	27
21	Size-Tunable Alumina-Encapsulated Sn-Based Phase Change Materials for Thermal Energy Storage. ACS Applied Nano Materials, 2019, 2, 3752-3760.	2.4	26
22	Synthesis and characterization of metal-filled carbon nanotubes by microwave plasma chemical vapor deposition. Diamond and Related Materials, 2005, 14, 790-793.	1.8	24
23	Behavior of Cu nanoparticles ink under reductive calcination for fabrication of Cu conductive film. Thin Solid Films, 2012, 520, 2789-2793.	0.8	24
24	One-Minute Joule Annealing Enhances the Thermoelectric Properties of Carbon Nanotube Yarns via the Interface. ACS Applied Energy Materials, 2019, 2, 7700-7708.	2.5	24
25	Corn-shape carbon nanofibers with dense graphite synthesized by microwave plasma-enhanced chemical vapor deposition. Applied Physics Letters, 2004, 84, 2886-2888.	1.5	22
26	Environment-Sensitive Thermal Coarsening of Nanoporous Gold. Materials Transactions, 2015, 56, 468-472.	0.4	22
27	Consolidation of undoped, monoclinic zirconia polycrystals by flash sintering. Journal of the American Ceramic Society, 2017, 100, 3851-3857.	1.9	21
28	Intergranular amorphous films formed by DC electric field in pure zirconia. Journal of the American Ceramic Society, 2018, 101, 3282-3287.	1.9	21
29	Crystalline boron monosulfide nanosheets with tunable bandgaps. Journal of Materials Chemistry A, 2021, 9, 24631-24640.	5.2	21
30	Microstructure of metal-filled carbon nanotubes. Journal of Electron Microscopy, 2004, 53, 149-155.	0.9	20
31	Plasma induced tungsten doping of TiO ₂ particles for enhancement of photocatalysis under visible light. Physical Chemistry Chemical Physics, 2015, 17, 24556-24559.	1.3	20
32	Cobalt nanorods fully encapsulated in carbon nanotube and magnetization measurements by off-axis electron holography. Applied Physics Letters, 2006, 88, 243118.	1.5	19
33	Suppression of nitridation of yttriaâ€doped zirconia during flash sintering. Journal of the American Ceramic Society, 2020, 103, 3002-3007.	1.9	19
34	Earthâ€Abundant and Durable Nanoporous Catalyst for Exhaustâ€Gas Conversion. Advanced Functional Materials, 2016, 26, 1609-1616.	7.8	18
35	Nanophase-separated Ni ₃ Nb as an automobile exhaust catalyst. Chemical Science, 2017, 8, 3374-3378.	3.7	18
36	Formation of secondary phase at grain boundary of flash-sintered BaTiO ₃ . Microscopy (Oxford, England), 2014, 63, i19-i20.	0.7	17

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37	Near complete densification of flash sintered 8YSZ: controlled shrinkage rate effects. Journal of the European Ceramic Society, 2021, 41, 4567-4571.	2.8	17
38	Matrix Sputtering into Liquid Mercaptan: From Blue-Emitting Copper Nanoclusters to Red-Emitting Copper Sulfide Nanoclusters. Langmuir, 2016, 32, 12159-12165.	1.6	16
39	Highly Correlated Size and Composition of Pt/Au Alloy Nanoparticles via Magnetron Sputtering onto Liquid. Langmuir, 2020, 36, 3004-3015.	1.6	16
40	Encapsluation of Co and Pd multi-metal nanowires inside multiwalled carbon nanotubes by microwave plasma chemical vapor deposition. Diamond and Related Materials, 2007, 16, 1200-1203.	1.8	15
41	Small Nanosized Oxygen-Deficient Tungsten Oxide Particles: Mechanistic Investigation with Controlled Plasma Generation in Water for Their Preparation. ACS Omega, 2017, 2, 5104-5110.	1.6	15
42	Preparation and Growth Mechanism of Pt/Cu Alloy Nanoparticles by Sputter Deposition onto a Liquid Polymer. Langmuir, 2019, 35, 8418-8427.	1.6	15
43	Flash sintering for BaTiO ₃ with square alternating current field including zero-field duration. Journal of the Ceramic Society of Japan, 2020, 128, 1018-1023.	0.5	15
44	In-Situ TEM Study of a Nanoporous Ni–Co Catalyst Used for the Dry Reforming of Methane. Metals, 2017, 7, 406.	1.0	14
45	A liquid metal catalyst for the conversion of ethanol into graphitic carbon layers under an ultrasonic cavitation field. Chemical Communications, 2022, 58, 7741-7744.	2.2	14
46	In-situ TEM studies of the sintering behavior of copper nanoparticles covered by biopolymer nanoskin. Journal of Electron Microscopy, 2010, 59, S75-S80.	0.9	13
47	Structural Control Parameters for Formation of Single-Crystalline β-Sn Nanorods in Organic Phase. Crystal Growth and Design, 2017, 17, 4554-4562.	1.4	13
48	Ligand free green plasma-in-liquid synthesis of Au/Ag alloy nanoparticles. New Journal of Chemistry, 2018, 42, 5680-5687.	1.4	13
49	Temperature distributions of electron beamâ€irradiated samples by scanning electron microscopy. Journal of Microscopy, 2012, 248, 228-233.	0.8	12
50	Green Synthesis of Size-Tunable Iron Oxides and Iron Nanoparticles in a Salt Matrix. ACS Sustainable Chemistry and Engineering, 2019, 7, 17697-17705.	3.2	12
51	Shrinkage rate control during a flash state by currentâ€ramping for 3 mol% Y ₂ O ₃ â€doped ZrO ₂ polycrystals. Journal of the American Ceramic Society, 2021, 104, 4960-4967.	1.9	12
52	Formation of wedge-shaped carbon film by chemical vapor deposition method and observation using transmission electron microscopy. Scripta Materialia, 2005, 52, 1205-1209.	2.6	11
53	Encapsulation of segmented Pd–Co nanocomposites into vertically aligned carbon nanotubes by plasma-hydrogen-induced demixing. Applied Physics Letters, 2007, 90, 133116.	1.5	11
54	Growth and Optical Properties of Rectangular Hollow Tube TiO2Crystals with Rutile-Type Structure. Crystal Growth and Design, 2011, 11, 4427-4432.	1.4	11

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55	Titanium oxide nanoparticle dispersions in a liquid monomer and solid polymer resins prepared by sputtering. New Journal of Chemistry, 2016, 40, 9337-9343.	1.4	11
56	Rapid sintering of 3 mol % Y ₂ O ₃ -doped ZrO ₂ by a combined rapid furnace heating and shrinkage-controlled flash sintering protocol. Journal of the Ceramic Society of Japan, 2021, 129, 551-554.	0.5	10
57	Variation of photoluminescence intensity depending on the timing of electric field application during isothermal flash sintering for 3mol%Y2O3–ZrO2 polycrystal. Ceramics International, 2022, 48, 28712-28717.	2.3	10
58	Synthesis and characterization of carbon nanotube grown on flexible and conducting carbon fiber sheet for field emitter. Diamond and Related Materials, 2009, 18, 341-344.	1.8	9
59	Direct observation of B-site ordering in LSAT: (La0.3Sr0.7)(Al0.65Ta0.35)O3 single crystal. Applied Physics Letters, 2016, 108, 251905.	1.5	9
60	Sputter Deposition toward Short Cationic Thiolated Fluorescent Gold Nanoclusters: Investigation of Their Unique Structural and Photophysical Characteristics Using High-Performance Liquid Chromatography. Langmuir, 2018, 34, 4024-4030.	1.6	9
61	Nanoporous Nickel Composite Catalyst for the Dry Reforming of Methane. ACS Omega, 2018, 3, 16651-16657.	1.6	9
62	Synthesis of composition-tunable Pd–Cu alloy nanoparticles by double target sputtering. New Journal of Chemistry, 2020, 44, 4704-4712.	1.4	9
63	Cross-sectional Area Dependency of Shrinkages and Grain Sizes of Flash-sintered 3 mol%Y ₂ 0 ₃ –ZrO ₂ Polycrystals with a Circular Truncated Cone-shape at High Frequency Alternating Electric Current Fields. Funtai Oyobi Fummatsu Yakin/lournal of the Japan Society of Powder and Powder Metallurgy, 2021, 68, 487-493.	0.1	9
64	Excess oxygen-vacancy formed by FAST regime of direct-current electric field during flash sintering for 3Âmol%–10Âmol% Y2O3-doped ZrO2. Ceramics International, 2022, 48, 12091-12097.	2.3	9
65	Anelasticity induced by AC flash processing of cubic zirconia. Acta Materialia, 2022, 227, 117704.	3.8	9
66	Hopping carrier mobilities and thermoelectric properties of oxide materials with perovskite-related structure. , 0, , .		8
67	Microstructure Analyses of Metal-Filled Carbon Nanotubes Synthesized by Microwave Plasma-Enhanced Chemical Vapor Deposition. IEEE Nanotechnology Magazine, 2006, 5, 485-490.	1.1	8
68	surfaces. Surface Science, 2006, 600, 4077-4080.	0.8	7
69	Oxidation kinetics of single crystal silicon carbide using electron microscopy. Journal of the Ceramic Society of Japan, 2012, 120, 181-185.	0.5	7
70	Technique to control specimen electric current during a flash state with alternating current electric fields. Journal of the Ceramic Society of Japan, 2019, 127, 849-851.	0.5	7
71	Hard-templating synthesis of macroporous platinum microballs (MPtM). Materials Letters, 2016, 164, 488-492.	1.3	6
72	Synthesis of corn-shape carbon nanofibers on Si and Mo substrates by bias-enhanced microwave plasma chemical vapor deposition. Diamond and Related Materials, 2004, 13, 1198-1202.	1.8	5

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73	Demixing of Solid-Soluted Co-Pd Binary Alloy Induced by Microwave Plasma Hydrogen Irradiation Technique. Japanese Journal of Applied Physics, 2006, 45, L860-L863.	0.8	5
74	Facile fabrication and structural studies of filtered Ge nanowires from aged Al–Ge alloy. Scripta Materialia, 2007, 57, 281-284.	2.6	5
75	High temperature in-situ observations of multi-segmented metal nanowires encapsulated within carbon nanotubes by in-situ filling technique. Nanoscale Research Letters, 2012, 7, 448.	3.1	5
76	Observation of Microstructural Changes in Polymer-Coated Kompeito-Type Platinum Particles by <i>In Situ</i> Heating TEM. Journal of Nanoscience and Nanotechnology, 2012, 12, 2612-2616.	0.9	5
77	In Situ Transmission Electron Microscopic Observation of Double-wall TiO2 Nanotube Arrays at High Temperature. Chemistry Letters, 2014, 43, 1514-1516.	0.7	5
78	Methane decomposition for hydrogen production by catalytic activity of carbon black under low flow rate conditions. Journal of the Ceramic Society of Japan, 2017, 125, 185-189.	0.5	5
79	Removal of carbon contamination in ETEM by introducing Ar during electron beam irradiation. Journal of Microscopy, 2019, 273, 46-52.	0.8	5
80	Alginate-Stabilized Gold Nanoparticles Prepared Using the Microwave-Induced Plasma-in-Liquid Process with Long-Term Storage Stability for Potential Biomedical Applications. ACS Omega, 2022, 7, 6238-6247.	1.6	5
81	Characterization of transport properties of multiwalled carbon nanotube networks by microwave plasma chemical vapor deposition. Diamond and Related Materials, 2006, 15, 1138-1142.	1.8	4
82	In situ observation of carbon nanotube yarn during voltage application. Micron, 2015, 74, 30-34.	1.1	4
83	Directly determining the polarity of WC grains in WC–12 wt%Co alloy by ABF-STEM. International Journal of Refractory Metals and Hard Materials, 2017, 62, 9-13.	1.7	4
84	Power Dissipation Behaviors during SCF-sintering for 8 mol% Y ₂ O ₃ -doped ZrO ₂ . Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2021, 68, 482-486.	0.1	4
85	Growth and Nanoscale Magnetic Properties of Ferromagnetic Nanowire Encapsulated Inside Carbon Nanotubes. IEEE Transactions on Magnetics, 2009, 45, 2488-2491.	1.2	3
86	Characterization of oxide scales thermally formed on single-crystal silicon carbide. Journal of Electron Microscopy, 2010, 59, S123-S127.	0.9	3
87	A method for accurate temperature measurement using infrared thermal camera. Journal of Electron Microscopy, 2012, 61, 223-227.	0.9	3
88	Characterization of microstructures of thermal oxide scales on silicon carbide using transmission electron microscopy. Journal of the Ceramic Society of Japan, 2012, 120, 64-68.	0.5	3
89	Blue photoluminescence at room temperature from Y2O3-doped ZrO2 polycrystals sintered by flash sintering. Applied Physics Express, 2020, 13, 035506.	1.1	3
90	Low-Temperature Fabrication of Ion-Induced Ge Nanostructures: Effect of Simultaneous Al Supply. IEICE Transactions on Electronics, 2009, E92-C, 1417-1420.	0.3	3

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91	Microstructure and local magnetic induction of segmented and alloyed Pd/Co nanocomposites encapsulated inside vertically aligned multiwalled carbon nanotubes. Diamond and Related Materials, 2008, 17, 1525-1528.	1.8	2
92	Low-Temperature Fabrication of Germanium Nanostructures by Ion Irradiation: Effect of Supplied Particle Species. Japanese Journal of Applied Physics, 2012, 51, 01AB05.	0.8	2
93	Microstructure Characterization of Defects in Cubic Silicon Carbide Using Transmission Electron Microscopy. Microscopy and Microanalysis, 2013, 19, 119-122.	0.2	2
94	Improved properties of Carbon nanotube yarn spun from dense and long carbon nanotube forest. , 2015, , .		2
95	H2 production from methane decomposition by fullerene at low temperature. International Journal of Hydrogen Energy, 2020, 45, 14347-14353.	3.8	2
96	Constant shrinkage rate control during a flash event for 8 mol %Y ₂ 0 ₃ -doped ZrO ₂ polycrystals. Journal of the Ceramic Society of Japan, 2021, 129, 204-207.	0.5	2
97	In situ TEM observation of liquid-state Sn nanoparticles vanishing in a SiO2 structure: a potential synthetic tool for controllable morphology evolution from core–shell to yolk–shell and hollow structures. Nanoscale Advances, 2020, 2, 1456-1464.	2.2	2
98	Stacking Faults around the Hetero-Interface Induced by 6H-SiC Polytype Transformation on 3C-SiC with Solution Growth. Materials Science Forum, 0, 645-648, 363-366.	0.3	1
99	Direct growth of horizontally aligned carbon nanotubes between electrodes and its application to field-effect transistors. , 2010, , .		1
100	Growth and structure analysis of tungsten oxide nanorods using environmental transmission electron microscopy. , 2011, , .		1
101	In-situ TEM observation of internal metal inside metal filled carbon fiber. Diamond and Related Materials, 2011, 20, 210-212.	1.8	1
102	Direct Growth of Horizontally Aligned Carbon Nanotubes between Electrodes and Its Application to Field-Effect Transistors. Journal of Nanoscience and Nanotechnology, 2011, 11, 11011-11014.	0.9	1
103	Fabrication of Ge nanoneedles by ion-irradiation method. Surface and Coatings Technology, 2011, 206, 812-815.	2.2	1
104	Fabrication of tin-filled carbon nanofibres by microwave plasma vapour deposition and their in situ heating observation by environmental transmission electron microscopy. Nanoscale Research Letters, 2013, 8, 302.	3.1	1
105	Growth of rectangular hollow tube crystals with rutile-type structure in supercritical fluids. Journal of Physics: Conference Series, 2014, 500, 022007.	0.3	1
106	Direct determination of a topmost atomic layer of (100) surfaces on (La 0.3 Sr 0.7)(Al 0.65 Ta 0.35)O 3 single crystals annealed in air by highâ€resolution scanning transmission electron microscopy. Surface and Interface Analysis, 0, , .	0.8	1
107	Effect of electron beam irradiation in gas atmosphere during ETEM. Micron, 2022, 158, 103289.	1.1	1
108	Ion Implantation Effects of Microcrystalline and Nanocrystalline Diamond Thin Films. Japanese Journal of Applied Physics, 2004, 43, 7971-7975.	0.8	0

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109	Microstructure analyses of metal-filled carbon nanotubes synthesized by microwave plasma-enhanced chemical vapour deposition. , 0, , .		0
110	Growth and magnetic properties of ferromagnetic Co nanorods filled inside carbon nanotubes towards nanoscale spintronics. , 2008, , .		0
111	Low-temperature fabrication and characterization of ion-induced Ge nanostructures. , 2010, , .		0
112	Microstructural Characterization of Epitaxial Cubic Silicon Carbide Using Transmission Electron Microscopy. Materials Science Forum, 0, 645-648, 379-382.	0.3	0
113	Growth and structure analysis of Tungsten oxide nanorods using Environmental TEM. , 2010, , .		0
114	The growth and characterization of Zn nanowires covered with ZnO using plasma-assisted molecular beam irradiation. , 2011, , .		0
115	Transmission Electron Microscopy Observation of Nickel-Yttria Stabilized Zirconia Catalyst for Solid Oxide Fuel Cells in Methane Atmosphere. ECS Transactions, 2013, 57, 1455-1462.	0.3	0
116	Fabrication of metal nanoparticles from metal-filled carbon nanofibers and their size control by heating. , 2013, , .		0
117	Surface precipitates formed on annealed LSAT (001) single crystal. Microscopy (Oxford, England), 2014, 63, i20.1-i20.	0.7	0
118	Intentionally encapsulated metal alloys within vertically aligned multi-walled carbon nanotube array via chemical vapor deposition technique. , 2017, , .		0
119	Low-Temperature Fabrication of Germanium Nanostructures by Ion Irradiation: Effect of Supplied Particle Species. Japanese Journal of Applied Physics, 2012, 51, 01AB05.	0.8	0
120	B-site Ordered Atomic Structure in LSAT: (La _{0.3} Sr _{0.7})(Al _{0.65} Ta _{0.35})O ₃ Single Crystal. Materia Japan, 2019, 58, 93-93.	0.1	0
121	Anisotropic Growth of Copper Nanorods Mediated by Cl [–] Ions. ACS Omega, 2022, 7, 7414-7420.	1.6	0
122	A first attempt of automated shrinkage-rate control flash sintering using a current profile without feedback of shrinkage behavior for 8 mol %Y ₂ 0 ₃ -doped ZrO ₂ . Journal of the Ceramic Society of Japan, 2022, 130, 327-330.	0.5	0