Hiroki Matsuo

List of Publications by Year
in descending order

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66	2,036	331670 21	243625 44
papers	citations	h-index	g-index

67	67	67	1530
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ferroelectric polarization of tetragonal BiFeO₃â€"an approach from DFT calculations for BiFeO₃â€"BaTiO₃ superlatticesâ€". Japanese Journal of Applied Physics, 2022, 61, SN1002.	1.5	2
2	Carbon-dioxide activation by methane with iron-doped barium zirconate in chemical looping cracking system. Chemical Engineering Journal, 2021, 417, 128012.	12.7	7
3	Effective electrode design and the reaction mechanism for electrochemical promotion of ammonia synthesis using Fe-based electrode catalysts. Sustainable Energy and Fuels, 2021, 5, 188-198.	4.9	9
4	Domain-wall photovoltaic effect in Fe-doped BaTiO3 single crystals. Journal of Applied Physics, 2021, 129, 084101.	2.5	9
5	Effect of lanthanum tungstate hole-blocking layer for improvement of energy efficiency in anode-supported protonic ceramic fuel cells. Journal of the Ceramic Society of Japan, 2021, 129, 147-153.	1.1	2
6	Experimental analyses for electronic structure of barium zirconateâ€strontium zirconate protonâ€conducting solid solution. Journal of the American Ceramic Society, 2021, 104, 5740-5749.	3.8	0
7	Defect chemistry in perovskite ferroelectricsâ€"History, present status, and future prospectsâ€". Journal of the Ceramic Society of Japan, 2021, 129, 271-285.	1.1	8
8	Ferroelectric photovoltaic tensor in visible-light-active Fe-doped BaTiO3 single crystals. Japanese Journal of Applied Physics, 2021, 60, SFFA01.	1.5	6
9	Evaluation of Transport Properties of Lanthanum-Based Proton-Conducting Composite Electrolytes. ECS Transactions, 2021, 103, 2117-2124.	0.5	0
10	Design and Modeling of Proton-Conducting Bilayer Electrolytes Using a Nernst-Planck-Poisson Formulation. ECS Transactions, 2021, 103, 1763-1777.	0.5	2
11	Polarization and Dielectric Properties of BiFeO3-BaTiO3 Superlattice-Structured Ferroelectric Films. Nanomaterials, 2021, 11, 1857.	4.1	7
12	Kinetic and deuterium isotope analyses of ammonia electrochemical synthesis. RSC Advances, 2021, 11, 17891-17900.	3.6	3
13	Suppression of Leakage Current in Proton-Conducting BaZr_{0.8}Y_{0.2}O_{3â^'Î´} Electrolyte by Forming Hole-Blocking Layer. Journal of the Electrochemical Society, 2020, 167, 084515.	2.9	16
14	Enhanced photovoltaic effects in ferroelectric solid solution thin films with nanodomains. Applied Physics Letters, 2020, 116, .	3.3	17
15	Nanoscale structural analysis of Bi0.5Na0.5TiO3. Japanese Journal of Applied Physics, 2020, 59, SPPA01.	1.5	20
16	Successive redox-mediated visible-light ferrophotovoltaics. Nature Communications, 2020, 11, 966.	12.8	25
17	Composition-driven structural variation in ferrielectric phase of (Bi1/2Na1/2)TiO3-Ba(Mg1/3Nb2/3)O3. Japanese Journal of Applied Physics, 2019, 58, SLLA04.	1.5	2
18	Leakage Current and Chemical Potential Profile in Proton-Conducting Bi-Layered Solid Oxide Electrolyte with BZY and Hole-Blocking Layers. ECS Transactions, 2019, 91, 1009-1018.	0.5	3

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19	Deuterium Isotope Analysis of Electrochemical Promotion in Ammonia Synthesis on Iron-Based Catalyst. ECS Transactions, 2019, 91, 2761-2769.	0.5	2
20	Impact of lattice defects on water oxidation properties in SnNb2O6 photoanode prepared by pulsed-laser deposition method. Journal of Applied Physics, 2019, 126, .	2.5	5
21	Performance of Anode-Supported Proton-Conducting Solid Oxide Fuel Cells with Lanthanum-Based Thin Bilayer Electrolyte. ECS Transactions, 2019, 91, 1019-1028.	0.5	3
22	Fabrication and electrochemical performance of anode-supported solid oxide fuel cells based on proton-conducting lanthanum tungstate thin electrolyte. Solid State Ionics, 2019, 337, 132-139.	2.7	9
23	Ferroelectrics with a controlled oxygen-vacancy distribution by design. Scientific Reports, 2019, 9, 4225.	3.3	44
24	Crystal structure and ferroelectric polarization of tetragonal (Bi1/2Na1/2)TiO3â€“12BaTiO3. Japanese Journal of Applied Physics, 2018, 57, 11UD05.	1.5	5
25	Fabrication and characterization of (Ba, Sr)RuO3 ceramic targets and thin films for ferroelectric BaTiO3 thin-film capacitors. AIP Advances, 2018, 8, 115135.	1.3	1
26	Control of misfit strain in ferroelectric BaTiO3 thin-film capacitors with SrRuO3-based electrodes on (Ba, Sr)TiO3-buffered SrTiO3 substrates. Applied Physics Letters, 2018, 113, 012903.	3.3	10
27	Gap-state engineering of visible-light-active ferroelectrics for photovoltaic applications. Nature Communications, 2017, 8, 207.	12.8	126
28	Enhanced polarization properties of ferroelectric (Bi_{1/2}Na_{1/2})TiO₃–Ba(Mg_{1/3}N single crystals grown under high-pressure oxygen atmosphere. Journal of the Ceramic Society of Japan, 2017, 125, 463-467.	1.1	3
29	Electronic Origin of Defect States in Fe-Doped LiNbO₃Ferroelectrics. Advances in Condensed Matter Physics, 2016, 2016, 1-10.	1.1	14
30	Temperature dependence of electrical resistivity, dielectric and piezoelectric properties of Ca3TaGa3â^'xAlxSi2O14 single crystals as a function of Al content. Journal of Alloys and Compounds, 2016, 687, 797-803.	5.5	12
31	Bulk and domain-wall effects in ferroelectric photovoltaics. Physical Review B, 2016, 94, .	3.2	43
32	Cooperative effect of oxygen-vacancy-rich layer and ferroelectric polarization on photovoltaic properties in BiFeO3 thin film capacitors. Applied Physics Letters, 2016, 108, .	3.3	41
33	Crystal structure and polarization hysteresis properties of ferroelectric BaTiO3thin-film capacitors on (Ba,Sr)TiO3-buffered substrates. Japanese Journal of Applied Physics, 2016, 55, 10TA03.	1.5	4
34	Strong interaction between ferroelectric polarization and oxygen vacancy in BiFeO₃ thin film capacitors. Journal of the Ceramic Society of Japan, 2016, 124, 634-638.	1.1	7
35	Photon energy dependence of photovoltaic properties in ferroelectric BiFeO₃ thin-film capacitors. Transactions of the Materials Research Society of Japan, 2016, 41, 201-204.	0.2	0
36	Ferrielectric phase in the (Bi1/2Na1/2)TiO3â€“Ba(Mg1/3Nb2/3)O3system. Japanese Journal of Applied Physics, 2015, 54, 10NC05.	1.5	13

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37	Heavy Mn-doping effect on spontaneous polarization in ferroelectric BiFeO₃thin films. Japanese Journal of Applied Physics, 2015, 54, 10NA03.	1.5	22
38	Switchable diode-effect mechanism in ferroelectric BiFeO3 thin film capacitors. Journal of Applied Physics, 2015, 118, .	2.5	44
39	Giant photovoltaic effect of ferroelectric domain walls in perovskite single crystals. Scientific Reports, 2015, 5, 14741.	3.3	63
40	Enhanced photovoltaic currents in strained Feâ€doped LiNbO₃ films. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2968-2974.	1.8	23
41	Electrical conduction mechanism in BiFeO₃-based ferroelectric thin-film capacitors: Impact of Mn doping. Journal of Asian Ceramic Societies, 2015, 3, 426-431.	2.3	17
42	Local polarization switching in epitaxial thin films of ferroelectric (Bi1/2Na1/2)TiO3. Journal of Asian Ceramic Societies, 2015, 3, 160-163.	2.3	9
43	Polarization Rotation and Monoclinic Distortion in Ferroelectric (Bi0.5Na0.5)TiO3â€“BaTiO3 Single Crystals under Electric Fields. Crystals, 2014, 4, 273-295.	2.2	23
44	Non-180Â° polarization rotation of ferroelectric (Bi0.5Na0.5)TiO3single crystals under electric field. Physical Review B, 2014, 89, .	3.2	29
45	Polarization properties and crystal structures of ferroelectric (Ba,Ca)TiO₃ single crystals. Journal of Advanced Dielectrics, 2014, 04, 1450003.	2.4	8
46	Barium titanate dispersion obtained by a high pressure methods and light resistant composites containing the nanoparticles. Journal of the Ceramic Society of Japan, 2014, 122, 129-133.	1.1	2
47	Polarization degradation and oxygen-vacancy rearrangement in Mn-doped BaTiO₃ ferroelectrics ceramics. Journal of the Ceramic Society of Japan, 2014, 122, 373-380.	1.1	8
48	Polarization-switching dynamics and microstructures of ferroelectric (Bi0.5Na0.5)TiO3 single crystals. Journal of the Korean Physical Society, 2013, 62, 1035-1040.	0.7	2
49	Enhanced polarization switching in ferroelectric Bi_{0.5}Na_{0.5}TiO₃ single crystals by defect control. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 791-795.	1.8	7
50	Photocurrent Characteristics of Mn-Doped Barium Titanate Ferroelectric Single Crystals. Japanese Journal of Applied Physics, 2013, 52, 09KF03.	1.5	19
51	Crystal Growth and Characterization of (Bi$_{0.5}$Na$_{0.5}$)TiO$_{3}$â€“BaTiO$_{3}$ Single Crystals Obtained by a Top-Seeded Solution Growth Method under High-Pressure Oxygen Atmosphere. Japanese Journal of Applied Physics, 2011, 50, 09NE07.	1.5	25
52	ENHANCED PIEZOELECTRIC PROPERTIES IN (Bi0.5K0.5)TiO3â€“(Bi0.5Na0.5)TiO3 FERROELECTRIC SINGLE CRYSTALS. Journal of Advanced Dielectrics, 2011, 01, 63-69.	2.4	7
53	High-Performance Ferroelectric Bi0.5Na0.5TiO3Single Crystals Grown by Top-Seeded Solution Growth Method under High-Pressure Oxygen Atmosphere. Ferroelectrics, 2011, 414, 24-29.	0.6	18
54	Oxygen-vacancy-induced<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>90</mml:mn><mml:mo>Â°</mml:mo></mml:mrow></mml:math>-domain clamping in ferroelectric<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Bi</mml:mtext></mml:mrow><mml:mn>4</mml:mn></mml:msub> Physical Review B, 2010, 81, .	3.2	97

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55	Structural and piezoelectric properties of high-density (Bi0.5K0.5)TiO3â€“BiFeO3 ceramics. Journal of Applied Physics, 2010, 108, .	2.5	73
56	High-Performance Ferroelectric Bi₄Ti₃O₁₂ Single Crystals Grown by Top-Seeded Solution Growth Method under High-Pressure Oxygen Atmosphere. Japanese Journal of Applied Physics, 2010, 49, 09MC06.	1.5	31
57	Microstructures Related to Ferroelectric Properties in (Bi_{0.5}K_{0.5})TiO₃â€“BiFeO₃. Japanese Journal of Applied Physics, 2010, 49, 09MC05.	1.5	19
58	High-Performance Bi_{0.5}Na_{0.5}TiO₃ Single Crystals Grown by High-Oxygen-Pressure Flux Method. Japanese Journal of Applied Physics, 2008, 47, 7623.	1.5	66
59	High-oxygen-pressure crystal growth of ferroelectric Bi4Ti3O12 single crystals. Applied Physics Letters, 2007, 91, 162909.	3.3	58
60	Ferroelectric domain structure and c-axis polarization switching in monoclinic Bi4Ti3O12 single crystals. Applied Physics Letters, 2007, 90, 202904.	3.3	20
61	High-Quality Lead-Free Ferroelectric Ceramics Prepared from the Flash-Creation-Method-Derived Nanopowder. Journal of the Ceramic Society of Japan, 2006, 114, 97-101.	1.3	23
62	Impact of Defect Control on the Polarization Properties in Bi4Ti3O12Ferroelectric Single Crystals. Japanese Journal of Applied Physics, 2005, 44, L570-L572.	1.5	106
63	Oxygen Vacancy Migration and Dispersive Photoconductivity in Bi4Ti3O12-d. Japanese Journal of Applied Physics, 2004, 43, 6649-6652.	1.5	7
64	Large remanent polarization of vanadium-doped Bi4Ti3O12. Applied Physics Letters, 2001, 78, 1903-1905.	3.3	391
65	Defect Control for Large Remanent Polarization in Bismuth Titanate Ferroelectrics -- Doping Effect of Higher-Valent Cations --. Japanese Journal of Applied Physics, 2000, 39, L1259-L1262.	1.5	338
66	High-quality ferroelectric Bi_{0.5}K_{0.5}TiO₃â€’BiFeO₃ solid-solution single crystals grown under high-pressure oxygen atmosphere. Applied Physics Express, 0, , .	2.4	1