Hidetaka Asoh

List of Publications by Year
in descending order

107 papers	4,031 citations	257429 24 h-index	118840 62 g-index
107 all docs	107 docs citations	107 times ranked	2647 citing authors

#	Article	IF	Citations
1	Fabrication of nanostructured DLC coatings using anodic alumina films. Diamond and Related Materials, 2022, , 109104.	3.9	0
2	Potential of micrometer-sized graphite as a catalyst for chemical etching of silicon. Materials Science in Semiconductor Processing, 2021, 121, 105327.	4.0	7
3	Chemical reaction between lead-free multicomponent alkali borosilicate glass frit and hematite during heat treatment. Journal of the European Ceramic Society, 2021, 41, 823-830.	5.7	6
4	A new perspective on pore growth in anodic alumina films. Electrochemistry Communications, 2021, 124, 106972.	4.7	13
5	Research Trends and Future of Anodization of Aluminum. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2021, 72, 180-188.	0.2	1
6	Mechanism of hot water sealing of anodic films formed on aluminum. Corrosion Science, 2021, 181, 109221.	6.6	16
7	DC bipolar anodization of aluminum: Wider anode area than expected on the bipolar electrodes. Electrochemistry Communications, 2021, 125, 107015.	4.7	7
8	Effects of nanoporous structure of anodic films on adhesive strength between aluminum alloys and polyamide resin. Keikinzoku/Journal of Japan Institute of Light Metals, 2021, 71, 234-240.	0.4	0
9	Forming Hard Anodic Films on Aluminum by Anodization in Oxalic Acid and Alcohol. Journal of the Electrochemical Society, 2021, 168, 103506.	2.9	12
10	Effects of Nanoporous Structure of Anodic Films on Adhesive Strength between Aluminum Alloys and Polyamide Resin. Materials Transactions, 2021, 62, 1724-1731.	1.2	5
11	Effects of size and position of an unconnected aluminum electrode on bipolar anodization in an AC electric field. Scientific Reports, 2021, 11, 22496.	3.3	6
12	Unusual surfaces with structural gradients: Investigation of potential gradients on bipolar electrodes during bipolar anodization of aluminum. Electrochemistry Communications, 2020, 120, 106849.	4.7	11
13	Formation Efficiency of Anodic Porous Alumina in Sulfuric Acid Containing Alcohol: Comparison of the Effects of Monohydric and Polyhydric Alcohols as Additives. Journal of the Electrochemical Society, 2020, 167, 041504.	2.9	18
14	Facile synthesis of size- and shape-controlled freestanding Au nanohole arrays by sputter deposition using anodic porous alumina templates. Nanotechnology, 2020, 31, 415303.	2.6	7
15	Bright Yellowish-Red Pigment Based on Hematite/Alumina Composites with a Unique Porous Disk-like Structure. ACS Omega, 2020, 5, 4330-4337.	3.5	16
16	Effect of alcohol addition on the structure and corrosion resistance of plasma electrolytic oxidation films formed on AZ31B magnesium alloy. RSC Advances, 2020, 10, 9026-9036.	3.6	9
17	Hierarchical porous structure with mesopores inside the pore wall of anodic porous alumina. , 2020, , 153-172.		1
18	Nanoporous Î±-alumina membranes with tunable pore diameters prepared by anodizing and heat treatment. , 2020, , 123-151.		1

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19	Anodic Films Formed on Magnesium Alloys by Plasma Electric Oxidation and Enhancement of Bioactivity. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2020, 71, 212-218.	0.2	0
20	(Invited) Formation Efficiency of Anodic Porous Alumina in Sulfuric Acid Containing Alcohol As Additives. ECS Meeting Abstracts, 2020, MA2020-02, 1232-1232.	0.0	0
21	Corrosion Resistance and Apatite-Forming Ability of Composite Coatings formed on Mgâ€“Alâ€“Znâ€“Ca Alloys. Materials, 2019, 12, 2262.	2.9	5
22	Effects of ethanol on the efficiency of the formation of anodic alumina in sulfuric acid. Surface and Coatings Technology, 2019, 378, 124947.	4.8	20
23	Bipolar anodic electrochemical exfoliation of graphite powders. Electrochemistry Communications, 2019, 104, 106475.	4.7	33
24	One-Pot Synthesis of Pt/Alumina Composites via AC-Bipolar Electrochemistry. ACS Applied Nano Materials, 2019, 2, 1791-1795.	5.0	14
25	Heat-induced structural transformations of anodic porous alumina formed in phosphoric acid. Microporous and Mesoporous Materials, 2018, 265, 77-83.	4.4	14
26	AC-Bipolar Anodization of Aluminum: Effects of Frequency on Thickness of Porous Alumina Films. Journal of the Electrochemical Society, 2018, 165, C295-C301.	2.9	16
27	Î±-Alumina membrane having a hierarchical structure of straight macropores and mesopores inside the pore wall. Journal of the European Ceramic Society, 2018, 38, 1836-1840.	5.7	17
28	Effect of Anodization on Biocompatibility of Metals. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2018, 69, 335-340.	0.2	1
29	Anodic Etching of III-V Compound Semiconductors. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2018, 69, 633-636.	0.2	0
30	Interaction between leadâ€free multicomponent alkali borosilicate glass frits and hematite in red overglaze enamels. Journal of the American Ceramic Society, 2018, 101, 4538-4548.	3.8	6
31	Anodizing of Magnesium. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2018, 69, 562-570.	0.2	2
32	Local Structural Analysis of Anodic Porous Alumina by Nuclear Magnetic Resonance Spectroscopy. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2018, 69, 596-599.	0.2	1
33	Effect of Electrolyte Concentration on the Structure and Corrosion Resistance of Anodic Films Formed on Magnesium through Plasma Electrolytic Oxidation. Electrochimica Acta, 2017, 240, 415-423.	5.2	78
34	NMR Spectroscopic Analysis of the Local Structure of Porous-Type Amorphous Alumina Prepared by Anodization. Journal of Physical Chemistry C, 2017, 121, 12300-12307.	3.1	16
35	Effect of Cathodic Current on the Structural Features of Oxide Films formed by AC Anodization of Aluminum. Journal of the Electrochemical Society, 2017, 164, C939-C944.	2.9	13
36	Effect of dispersion and aggregation of wet-synthesized Al-substituted hematite particles on color tone of powders and red overglaze enamels. Journal of the Ceramic Society of Japan, 2017, 125, S1-S7.	1.1	5

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37	Effects of Alloying Element Ca on the Corrosion Behavior and Bioactivity of Anodic Films Formed on AM60 Mg Alloys. Materials, 2017, 10, 11.	2.9	37
38	Au-Capped GaAs Nanopillar Arrays Fabricated by Metal-Assisted Chemical Etching. Nanoscale Research Letters, 2017, 12, 444.	5.7	8
39	Hydrogen exposure effects on anodically etched GaAs nanowires in liquid electrolyte. , 2016, , .		0
40	Well-Dispersed Î±-Fe₂O₃Particles for Lead-Free Red Overglaze Enamels through Hydrothermal Treatment. ACS Omega, 2016, 1, 9-13.	3.5	13
41	Indirect oxidation of aluminum under an AC electric field. RSC Advances, 2016, 6, 90318-90321.	3.6	17
42	Effect of Pulse-Reverse Current on AC Soft Magnetic Properties of Cofeni Film Formed by Pulse-Reverse Electrodeposition. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2016, 67, 607-613.	0.2	0
43	Electrochemical approach for creation of advanced aluminum materials. Keikinzoku/Journal of Japan Institute of Light Metals, 2015, 65, 416-424.	0.4	1
44	Fabrication and Characterization of Single Phase Î±-Alumina Membranes with Tunable Pore Diameters. Materials, 2015, 8, 1350-1368.	2.9	58
45	Enhanced uniformity of apatite coating on a PEO film formed on AZ31 Mg alloy by an alkali pretreatment. Surface and Coatings Technology, 2015, 272, 182-189.	4.8	38
46	Metal-assisted chemical etching of GaAs using Au catalyst deposited on the backside of a substrate. Electrochimica Acta, 2015, 183, 8-14.	5.2	14
47	Fundamental Technology that Support Functionalization of Alumite. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2014, 65, 406-413.	0.2	9
48	High-aspect-ratio vertically aligned GaAs nanowires fabricated by anodic etching. Materials Research Express, 2014, 1, 045002.	1.6	7
49	Characteristics and corrosion resistance of plasma electrolytic oxidation coatings on AZ31B Mg alloy formed in phosphate â€“ Silicate mixture electrolytes. Corrosion Science, 2014, 88, 254-262.	6.6	121
50	Nanoporous ^|^alpha;-Alumina Membrane Prepared by Anodizing and Heat Treatment. Electrochemistry, 2014, 82, 448-455.	1.4	22
51	Nanostructuring of Silicon using Anodic Porous Alumina Film. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2014, 65, 18-23.	0.2	1
52	Sub-100-nm ordered silicon hole arrays by metal-assisted chemical etching. Nanoscale Research Letters, 2013, 8, 410.	5.7	15
53	Metallographic effects of pure aluminum on properties of nanoporous anodic alumina (NPAA). Surface and Interface Analysis, 2013, 45, 1490-1496.	1.8	18
54	Fabrication and structure modulation of high-aspect-ratio porous GaAs through anisotropic chemical etching, anodic etching, and anodic oxidation. Electrochimica Acta, 2013, 110, 393-401.	5.2	19

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55	Electrochemical corrosion and bioactivity of titaniumâ€"hydroxyapatite composites prepared by spark plasma sintering. Corrosion Science, 2013, 70, 212-220.	6.6	81
56	Anodization Behavior of Aluminum in Ionic Liquids with a Small Amount of Water. Electrochemistry, 2013, 81, 440-447.	1.4	10
57	Effects of Electrolyte Species and Their Combination on Film Structures and Dielectric Properties of Crystalline Anodic Alumina Films Formed by Two-Step Anodization. Materials Transactions, 2013, 54, 1993-1999.	1.2	8
58	Triangle pore arrays fabricated on Si (111) substrate by sphere lithography combined with metal-assisted chemical etching and anisotropic chemical etching. Nanoscale Research Letters, 2012, 7, 406.	5.7	14
59	Hexagonal geometric patterns formed by radial pore growth of InP based on Voronoi tessellation. Nanotechnology, 2012, 23, 215304.	2.6	9
60	Nano/Micro-Patterning of Semiconductors by Site Selective Chemical Etching Using Noble Metals as Catalyst. , 2012, , .		2
61	Title is missing!. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2011, 62, 92-97.	0.2	1
62	High-aspect-ratio GaAs pores and pillars with triangular cross section. Electrochemistry Communications, 2011, 13, 458-461.	4.7	13
63	Anisotropic chemical etching of silicon through anodic oxide films formed on silicon coated with microspheres. Semiconductor Science and Technology, 2011, 26, 102001.	2.0	8
64	Anodizing under sparking of AZ31B magnesium alloy in Na3PO4 electrolyte. Keikinzoku/Journal of Japan Institute of Light Metals, 2010, 60, 608-614.	0.4	14
65	Ordered nanopore boring in silicon: Metal-assisted etching using a self-aligned block copolymer Au nanoparticle template and gravity accelerated etching. Electrochemistry Communications, 2010, 12, 565-569.	4.7	13
66	Siteâ€selective anodic etching of InP substrate using selfâ€organized spheres as mask. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 943-946.	1.8	15
67	Inside Back Cover (Phys. Status Solidi A 4/2010). Physica Status Solidi (A) Applications and Materials Science, 2010, 207, .	1.8	0
68	Control of nano/microstructure and pit initiation sites on aluminium surface by use of selfâ€assembled spheres. Surface and Interface Analysis, 2010, 42, 264-268.	1.8	8
69	Formation of Periodic Microbump Arrays by Metal-Assisted Photodissolution of InP. Japanese Journal of Applied Physics, 2010, 49, 046505.	1.5	25
70	Periodic GaAs Convex and Hole Arrays Produced by Metal-Assisted Chemical Etching. Japanese Journal of Applied Physics, 2010, 49, 116502.	1.5	19
71	Micro-Patterning of Semiconductors by Metal-Assisted Chemical Etching through Self-Assembled Colloidal Spheres. ECS Transactions, 2009, 19, 393-402.	0.5	6
72	Site-Selective Metal Patterning/Metal-Assisted Chemical Etching on GaAs Substrate Through Colloidal Crystal Templating. Journal of the Electrochemical Society, 2009, 156, H777.	2.9	24

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73	Effect of noble metal catalyst species on the morphology of macroporous silicon formed by metal-assisted chemical etching. Electrochimica Acta, 2009, 54, 5142-5148.	5.2	71
74	Structural features of anodic oxide films formed on aluminum substrate coated with self-assembled microspheres. Corrosion Science, 2009, 51, 1496-1500.	6.6	13
75	Effects of electrolyte pH and temperature on dielectric properties of anodic oxide films formed on niobium. Corrosion Science, 2009, 51, 1513-1518.	6.6	28
76	Site-selective chemical etching of GaAs through a combination of self-organized spheres and silver particles as etching catalyst. Electrochemistry Communications, 2008, 10, 757-760.	4.7	29
77	Influence of crystal orientation and surface topography of aluminum substrate on pore nucleation of anodic porous alumina. Keikinzoku/Journal of Japan Institute of Light Metals, 2008, 58, 375-380.	0.4	11
78	Electroless Deposition of Noble Metal Nano Particles as Catalyst and Subsequent Micropatterning of Silicon Substrate by Wet Chemical Etching. Electrochemistry, 2008, 76, 187-190.	1.4	4
79	Ptâ€"Pd-Embedded Silicon Microwell Arrays. Applied Physics Express, 2008, 1, 067003.	2.4	20
80	Site-selective chemical etching of silicon using patterned silver catalyst. Electrochemistry Communications, 2007, 9, 535-539.	4.7	38
81	Nanopatterning of silicon with use of self-organized porous alumina and colloidal crystals as mask. Electrochimica Acta, 2007, 52, 2898-2904.	5.2	39
82	Control of pit initiation sites on aluminum foil using colloidal crystals as mask. Electrochimica Acta, 2007, 53, 83-86.	5.2	19
83	Metal patterning on silicon surface by site-selective electroless deposition through colloidal crystal templating. Journal of Colloid and Interface Science, 2007, 316, 547-552.	9.4	31
84	Formation of microstructured silicon surfaces by electrochemical etching using colloidal crystal as mask. Electrochemistry Communications, 2006, 8, 1817-1820.	4.7	26
85	Electrochemical etching of silicon through anodic porous alumina. Electrochemistry Communications, 2005, 7, 953-956.	4.7	22
86	Self-ordering of anodic porous alumina formed in organic acid electrolytes. Electrochimica Acta, 2005, 51, 827-833.	5.2	311
87	Fabrication of self-ordered nanohole arrays on Si by localized anodization and subsequent chemical etching. Applied Surface Science, 2005, 252, 1668-1673.	6.1	9
88	Structure and property of anodic barrier films formed on aluminum in low voltage range. Electrochimica Acta, 2005, 50, 5103-5110.	5.2	24
89	Design of two-dimensional/three-dimensional composite porous alumina by colloidal crystal templating and subsequent anodization. Applied Physics Letters, 2005, 87, 103102.	3.3	14
90	Natural Lithography of Si Surfaces Using Localized Anodization and Subsequent Chemical Etching. Electrochemical and Solid-State Letters, 2005, 8, G172.	2.2	19

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91	Effect of Current Density on the Film Thickness and Structure of Anodic Barrier Films Formed on Aluminum at Low Voltage Region. Electrochemistry, 2005, 73, 145-149.	1.4	8
92	Crystallization and Dielectric Properties of Anodic Oxide Films Formed on Niobium. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2004, 55, 952-952.	0.2	13
93	Nanopatterning of Si Substrate Using Nanospheres as a Mask for Localized Anodization. Japanese Journal of Applied Physics, 2004, 43, 5667-5668.	1.5	10
94	Self-Ordering of Anodic Porous Alumina Induced by Local Current Concentration: Burning. Electrochemical and Solid-State Letters, 2004, 7, B21.	2.2	150
95	Controlling Factor of Self-Ordering of Anodic Porous Alumina. Journal of the Electrochemical Society, 2004, 151, B473.	2.9	313
96	Growth of anodic porous alumina with square cells. Electrochimica Acta, 2003, 48, 3171-3174.	5.2	73
97	Transfer of nanoporous pattern of anodic porous alumina into Si substrate. Applied Physics Letters, 2003, 83, 4408-4410.	3.3	78
98	Anodizing of Magnesium in Amine - Ethylene Glycol Electrolyte. Materials Science Forum, 2003, 419-422, 957-962.	0.3	22
99	Relationship between Pore Diameter to Cell Diameter Ratio and Self-Ordering of Anodic Porous Alumina. Electrochemistry, 2003, 71, 105-107.	1.4	11
100	Effect of Heat Treatment on Solubility of Anodic Porous Alumina. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2002, 53, 777-778.	0.2	7
101	Conditions for Fabrication of Ideally Ordered Anodic Porous Alumina Using Pretextured Al. Journal of the Electrochemical Society, 2001, 148, B152.	2.9	225
102	Fabrication of ideally ordered anodic porous alumina with 63 nm hole periodicity using sulfuric acid. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 569.	1.6	101
103	Photonic Band Gap in Anodic Porous Alumina with Extremely High Aspect Ratio Formed in Phosphoric Acid Solution. Japanese Journal of Applied Physics, 2000, 39, L1039-L1041.	1.5	92
104	Highly ordered nanochannel-array architecture in anodic alumina. Applied Physics Letters, 1997, 71, 2770-2772.	3.3	1,136
105	Fabrication of Ordered Anodic Nanoporous Alumina Layers and their Application to Nanotechnology. , 0, , 138-166.		8
106	Fabrication of Nanoporous Crystalline Alumina Membrane by Anodization of Aluminum. Materials Science Forum, 0, 783-786, 1470-1475.	0.3	11
107	Effect of Propanol on Growth Rate of Anodic Porous Alumina in Sulfuric Acid. Journal of the Electrochemical Society, 0, , .	2.9	0