

Shigenori Fujikawa

List of Publications by Year in descending order

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89
papers

2,650
citations

236925

25
h-index

197818

49
g-index

93
all docs

93
docs citations

93
times ranked

4030
citing authors

#	ARTICLE	IF	CITATIONS
1	Achieving a Carbon Neutral Future through Advanced Functional Materials and Technologies. Bulletin of the Chemical Society of Japan, 2022, 95, 73-103.	3.2	39
2	Electronic Structure of Carbon Dioxide in Sylgard-184 Evaluated by Using X-ray Emission Spectroscopy. Chemistry Letters, 2022, 51, 650-653.	1.3	0
3	Direct air capture by membranes. MRS Bulletin, 2022, 47, 416-423.	3.5	10
4	Suppression of radical attack in polymer electrolyte membranes using a vinyl polymer blend interlayer with low oxygen permeability. Journal of Membrane Science, 2022, 658, 120734.	8.2	2
5	A new strategy for membrane-based direct air capture. Polymer Journal, 2021, 53, 111-119.	2.7	76
6	Spray deposition of sulfonated cellulose nanofibers as electrolyte membranes in fuel cells. Cellulose, 2021, 28, 1355-1367.	4.9	20
7	“Artificial Wood” Lignocellulosic Membranes: Influence of Kraft Lignin on the Properties and Gas Transport in Tunicate-Based Nanocellulose Composites. Membranes, 2021, 11, 204.	3.0	2
8	Thermal and Gas Adsorption Properties of Tröger's Base/Diazacyclooctane Hybrid Ladder Polymers. ChemNanoMat, 2021, 7, 824-830.	2.8	4
9	Geological storage of CO ₂ and N ₂ O mixtures produced by membrane-based direct air capture (DAC)., 2021, 11, 610-618.		17
10	Self-supporting Functional Nanomembranes of Metal Oxide/Polymer Blends. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2021, , 442-452.	0.3	1
11	Robust, Hyper-Permeable Nanomembrane Composites of Poly(dimethylsiloxane) and Cellulose Nanofibers. ACS Applied Materials & Interfaces, 2021, 13, 61189-61195.	8.0	9
12	Production of Bio Hydrofined Diesel, Jet Fuel, and Carbon Monoxide from Fatty Acids Using a Silicon Nanowire Array-Supported Rhodium Nanoparticle Catalyst under Microwave Conditions. ACS Catalysis, 2020, 10, 2148-2156.	11.2	18
13	Polar Switching of Dipolar Molecules Confined in Submicron- and Micron-sized Pores in Polymer Films. Chemistry Letters, 2020, 49, 255-259.	1.3	3
14	Critical Role of the Molecular Interface in Double-Layered Pebax-1657/PDMS Nanomembranes for Highly Efficient CO ₂ /N ₂ Gas Separation. ACS Applied Materials & Interfaces, 2020, 12, 33196-33209.	8.0	41
15	Structure and Properties of Hybrid Film Fabricated by Spin-Assisted Layer-by-Layer Assembly of Sacran and Imogolite Nanotubes. Langmuir, 2020, 36, 1718-1726.	3.5	10
16	Fast Hydrophobicity Recovery of the Surface-Hydrophilic Poly(dimethylsiloxane) Films Caused by Rechemisorption of Dimethylsiloxane Derivatives. Langmuir, 2019, 35, 9747-9752.	3.5	19
17	Ultra-fast, Selective CO ₂ Permeation by Free-standing Siloxane Nanomembranes. Chemistry Letters, 2019, 48, 1351-1354.	1.3	22
18	Design of Polymer Coating Materials for Long-term Hydrophilic Stability of Poly(dimethylsiloxane) Surfaces. Chemistry Letters, 2019, 48, 1152-1155.	1.3	1

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19	The effect of oxygen on the tribology of (PEI/GO) ₁₅ multilayer solid lubricant coatings on steel substrates. <i>Wear</i> , 2019, 432-433, 102920.	3.1	3
20	Study of Gases Permeation in Necklace-Shaped Dimethylsiloxane Polymers Bearing POSS Cages. <i>Membranes</i> , 2019, 9, 54.	3.0	3
21	Molecular Hybridization of Polydimethylsiloxane with Zirconia for Highly Gas Permeable Membranes. <i>ACS Applied Polymer Materials</i> , 2019, 1, 1165-1174.	4.4	16
22	Effect of surface treatment on molecular alignment behavior by scanning wave photopolymerization. <i>Applied Physics Express</i> , 2019, 12, 041004.	2.4	7
23	Mechanical Reinforcement of Free-Standing Polymeric Nanomembranes via Aluminosilicate Nanotube Scaffolding. <i>ACS Applied Polymer Materials</i> , 2019, 1, 112-117.	4.4	10
24	Characterization of polymer-polymer type charge-transfer (CT) blend membranes for fuel cell application. <i>Data in Brief</i> , 2018, 18, 22-29.	1.0	4
25	Highly efficient transformation of linear poly(phenylene ethynylene)s into zigzag-shaped π -conjugated microporous polymers through boron-mediated alkyne benzannulation. <i>Materials Chemistry Frontiers</i> , 2018, 2, 807-814.	5.9	13
26	Specific Uniaxial Self-assembly of Columnar Perylene Liquid Crystals in Au Nanofin Arrays. <i>Chemistry Letters</i> , 2018, 47, 354-357.	1.3	0
27	Development of polymer-polymer type charge-transfer blend membranes for fuel cell application. <i>Journal of Membrane Science</i> , 2018, 548, 223-231.	8.2	11
28	Thickness Effect on CO ₂ /N ₂ Separation in Double Layer Pebax-1657®/PDMS Membranes. <i>Membranes</i> , 2018, 8, 121.	3.0	51
29	Effect of Hardness on Surface Strain of PDMS Films Detected by a Surface Labeled Grating Method. <i>Journal of Photopolymer Science and Technology</i> = [Fotoporima Konwakai Shi], 2018, 31, 523-526.	0.3	6
30	Ultra-low friction of polyethylenimine / molybdenum disulfide (PEI/MoS ₂) ₁₅ thin films in dry nitrogen atmosphere and the effect of heat treatment. <i>Tribology International</i> , 2018, 127, 255-263.	5.9	17
31	Membrane thinning for efficient CO ₂ capture. <i>Science and Technology of Advanced Materials</i> , 2017, 18, 816-827.	6.1	30
32	Preferential CO ₂ Separation Over Nitrogen by a Free-standing and Nanometer-thick Membrane. <i>Energy Procedia</i> , 2017, 114, 608-612.	1.8	4
33	Ultra-low friction between polymers and graphene oxide multilayers in nitrogen atmosphere, mediated by stable transfer film formation. <i>Carbon</i> , 2017, 122, 395-403.	10.3	48
34	Preparation of large, ultra-flexible and free-standing nanomembranes of metal oxide-polymer composite and their gas permeation properties. <i>Clean Energy</i> , 2017, 1, 80-89.	3.2	4
35	Effects of composition of the micro porous layer and the substrate on performance in the electrochemical reduction of CO ₂ to CO. <i>Journal of Power Sources</i> , 2016, 312, 192-198.	7.8	177
36	Fabrication and Unique Optical Properties of Two-Dimensional Silver Nanorod Arrays with Nanometer Gaps on a Silicon Substrate from a Self-Assembled Template of Diblock Copolymer. <i>Langmuir</i> , 2016, 32, 12504-12510.	3.5	4

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37	Macroscale Superlubricity of Multilayer Polyethylenimine/Graphene Oxide Coatings in Different Gas Environments. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 27179-27187.	8.0	57
38	High Temperature Proton Conduction in Nanocellulose Membranes: Paper Fuel Cells. <i>Chemistry of Materials</i> , 2016, 28, 4805-4814.	6.7	134
39	Alkaline anion exchange membranes based on KOH-treated multilayer graphene oxide. <i>Journal of Membrane Science</i> , 2016, 508, 51-61.	8.2	69
40	Photoinduced Crystallization in Ionic Liquids: Photodimerization-induced Equilibrium Shift and Crystal Patterning. <i>Chemistry Letters</i> , 2015, 44, 908-910.	1.3	8
41	A Palladium Nanoparticle and Silicon Nanowire Array Hybrid: A Platform for Catalytic Heterogeneous Reactions. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 127-131.	13.8	116
42	CO ₂ Separation with Nano-thick Polymeric Membrane for Pre-combustion. <i>Energy Procedia</i> , 2014, 63, 235-242.	1.8	5
43	Preferential CO ₂ Separation over H ₂ with Poly(amidoamine) Dendrimer-Containing Polymeric Membrane. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1660, 1.	0.1	0
44	Direct electrochemistry and intramolecular electron transfer of ascorbate oxidase confined on l-cysteine self-assembled gold electrode. <i>Bioelectrochemistry</i> , 2014, 95, 15-22.	4.6	17
45	Hydrogen storage and thermal conductivity properties of Mg-based materials with different structures. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 9893-9898.	7.1	27
46	High sensitivity refractive index sensing with strong light confinement in high-aspect-ratio U-cavity arrays. <i>Sensors and Actuators B: Chemical</i> , 2014, 202, 137-143.	7.8	2
47	An Alternative Carbon Dioxide Capture by Electrochemical Method. <i>Chemistry Letters</i> , 2014, 43, 1601-1603.	1.3	6
48	Preliminary Feasibility Study for On-Site Hydrogen Station with Distributed CO ₂ Capture and Storage System. <i>Energy Procedia</i> , 2014, 63, 4575-4584.	1.8	6
49	Facile strain analysis of largely bending films by a surface-labelled grating method. <i>Scientific Reports</i> , 2014, 4, 5377.	3.3	33
50	Molecular Insight into Different Denaturing Efficiency of Urea, Guanidinium, and Methanol: A Comparative Simulation Study. <i>Journal of Chemical Theory and Computation</i> , 2013, 9, 2540-2551.	5.3	18
51	1,4-Phenylene Octamers as Surface Modifiers for Homeotropic Columnar Ordering of Discotic Liquid Crystals. <i>Journal of the American Chemical Society</i> , 2013, 135, 14564-14567.	13.7	28
52	Sensitivity to refractive index of high-aspect-ratio nanofins with optical vortex. <i>Nanotechnology</i> , 2012, 23, 505502.	2.6	16
53	Controlled Polymerization and Self-Assembly of Halogen-Bridged Diruthenium Complexes in Organic Media and Their Dielectrophoretic Alignment. <i>Journal of the American Chemical Society</i> , 2012, 134, 1192-1199.	13.7	28
54	Au Double Nanopillars with Nanogap for Plasmonic Sensor. <i>Nano Letters</i> , 2011, 11, 8-15.	9.1	156

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55	Measurement of Contact-Angle Hysteresis for Droplets on Nanopillared Surface and in the Cassie and Wenzel States: A Molecular Dynamics Simulation Study. <i>ACS Nano</i> , 2011, 5, 6834-6842.	14.6	152
56	Size-Controlled Simple Fabrication of Free-Standing, Ultralong Metal Nanobelt Array. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 131-137.	0.9	4
57	Molecular dynamics simulations of urea-water binary droplets on flat and pillared hydrophobic surfaces. <i>Faraday Discussions</i> , 2010, 146, 185.	3.2	20
58	Manipulation of a one dimensional molecular assembly of helical superstructures by dielectrophoresis. <i>Applied Physics Letters</i> , 2009, 95, 163110.	3.3	1
59	Nanochannel Design by Molecular Imprinting on a Free-Standing Ultrathin Titania Membrane. <i>Langmuir</i> , 2009, 25, 11563-11568.	3.5	17
60	Coexistence and transition between Cassie and Wenzel state on pillared hydrophobic surface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 8435-8440.	7.1	395
61	Embedding of a gold nanofin array in a polymer film to create transparent, flexible and anisotropic electrodes. <i>Journal of Materials Chemistry</i> , 2009, 19, 2154.	6.7	14
62	Fabrication of nanofins of TiO ₂ and other metal oxides via the surface sol-gel process and selective dry etching. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2008, 321, 227-232.	4.7	5
63	Fabrication of nanoline arrays of noble metals by electroless plating and selective etching process. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2008, 321, 238-243.	4.7	8
64	Facile Fabrication of Silver Nanofin Array via Electroless Plating. <i>Langmuir</i> , 2008, 24, 4205-4208.	3.5	18
65	Rapid Fabrication of a Smooth Hollow-Spheres Array. <i>Bulletin of the Chemical Society of Japan</i> , 2007, 80, 1226-1228.	3.2	8
66	Photoluminescence Modification in 3D-Ordered Films of Fluorescent Microspheres. <i>Langmuir</i> , 2007, 23, 9109-9113.	3.5	21
67	Embedding of Individual Ferritin Molecules in Large, Self-Supporting Silica Nanofilms. <i>Langmuir</i> , 2007, 23, 4629-4633.	3.5	14
68	Efficient Fabrication and Enhanced Photocatalytic Activities of 3D-Ordered Films of Titania Hollow Spheres. <i>Journal of Physical Chemistry B</i> , 2006, 110, 13000-13004.	2.6	141
69	Fabrication of Arrays of Sub-20-nm Silica Walls via Photolithography and Solution-Based Molecular Coating. <i>Langmuir</i> , 2006, 22, 9057-9061.	3.5	30
70	Efficient fabrication of large, robust films of 3D-ordered polystyrene latex. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2006, 275, 209-217.	4.7	15
71	Gordon Bell finalists II—A 55 TFLOPS simulation of amyloid-forming peptides from yeast prion Sup35 with the special-purpose computer system MDGRAPE-3. , 2006, , .		43
72	3D Nanoarchitecture from Ultrathin Titania Film via Surface Sol-Gel Process and Photolithography. <i>Chemistry Letters</i> , 2005, 34, 1414-1415.	1.3	4

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73	Nanocopying of Individual DNA Strands and Formation of the Corresponding Surface Pattern of Titania Nanotube. <i>Langmuir</i> , 2005, 21, 8899-8904.	3.5	18
74	Surface Fabrication of Hollow Nanoarchitectures of Ultrathin Titania Layers from Assembled Latex Particles and Tobacco Mosaic Viruses as Templates. <i>Langmuir</i> , 2003, 19, 6545-6552.	3.5	65
75	Preparation of Porous and Nonporous Silica Nanofilms from Aqueous Sodium Silicate. <i>Chemistry of Materials</i> , 2003, 15, 3308-3313.	6.7	25
76	Nanocopying as a Means of 3D Nanofabrication: Scope and Prospects. <i>Australian Journal of Chemistry</i> , 2003, 56, 1001.	0.9	12
77	SYNTHESIS OF METAL AND METAL OXIDE NANOPARTICLES IN THE NANOSPACE OF ULTRATHIN TiO_2 -GEL FILMS: ROLE OF THE ION-EXCHANGE SITE. , 2003, , .		0
78	PREPARATION OF HOLLOW STRUCTURES COMPOSED OF TITANIA NANOCRYSTAL ASSEMBLY. <i>International Journal of Nanoscience</i> , 2002, 01, 617-620.	0.7	2
79	SYNTHESIS OF METAL AND METAL OXIDE NANOPARTICLES IN THE NANOSPACE OF ULTRATHIN TiO_2 -Gel FILMS: ROLE OF THE ION-EXCHANGE SITE. <i>International Journal of Nanoscience</i> , 2002, 01, 507-513.	0.7	0
80	Surface Fabrication of Interconnected Hollow Spheres of nm-Thick Titania Shell. <i>Chemistry Letters</i> , 2002, 31, 1134-1135.	1.3	11
81	A General, Efficient Method of Incorporation of Metal Ions into Ultrathin TiO_2 Films. <i>Chemistry of Materials</i> , 2002, 14, 3493-3500.	6.7	41
82	Reversible conversion of nanoparticles of metallic silver and silver oxide in ultrathin TiO_2 films: a chemical transformation in nano-space. <i>Chemical Communications</i> , 2002, , 1910-1911.	4.1	31
83	Organization of Hydrophilic Nanoparticles on a Hydrogel Surface and Their Gel-Assisted Transfer to Solid Substrates. <i>Advanced Materials</i> , 1998, 10, 1373-1376.	21.0	7
84	Protein Assembly on Solid Surfaces by Gel-Assisted Transfer (GAT) Technique. <i>Chemistry Letters</i> , 1998, 27, 821-822.	1.3	1
85	AFM Observation of Organogel Nanostructures on Graphite in the Gel-Assisted Transfer Technique. <i>Chemistry Letters</i> , 1998, 27, 967-968.	1.3	20
86	Organization of Hydrophilic Nanoparticles on a Hydrogel Surface and Their Gel-Assisted Transfer to Solid Substrates. , 1998, 10, 1373.		1
87	Organization of Hydrophilic Nanoparticles on a Hydrogel Surface and Their Gel-Assisted Transfer to Solid Substrates. <i>Advanced Materials</i> , 1998, 10, 1373-1376.	21.0	1
88	Mesoscopic supramolecular assembly of a Janus™ molecule and a melamine derivative via complementary hydrogen bonds. <i>Journal of the Chemical Society Chemical Communications</i> , 1995, , 2103-2104.	2.0	46
89	First synthesis of chlorin skeleton containing thiazole and thiophene rings and its optical properties. <i>Journal of Porphyrins and Phthalocyanines</i> , 0, , .	0.8	0