Akira Yamaguchi

List of Publications by Year
in descending order

78 papers	2,349 citations	257450 24 h-index	214800 47 g-index
78 all docs	78 docs citations	78 times ranked	2732 citing authors

#	Article	IF	Citations
1	Self-assembly of a silicaâ€“surfactant nanocomposite in a porous alumina membrane. Nature Materials, 2004, 3, 337-341.	27.5	441
2	Reversible phase transitions in polymer gels induced by radiation forces. Nature, 2000, 408, 178-181.	27.8	321
3	A heater-integrated transparent microchannel chip for continuous-flow PCR. Sensors and Actuators B: Chemical, 2002, 84, 283-289.	7.8	179
4	Nanoporous Waveguide Sensor with Optimized Nanoarchitectures for Highly Sensitive Label-Free Biosensing. ACS Nano, 2012, 6, 1541-1547.	14.6	108
5	Flexural Rigidity of a Single Microtubule. Japanese Journal of Applied Physics, 2002, 41, 3015-3019.	1.5	69
6	Optical Waveguide Sensor Based on a Porous Anodic Alumina/Aluminum Multilayer Film. Analytical Chemistry, 2009, 81, 105-111.	6.5	68
7	Electrochemical modification of benzo-15-crown-5 ether on a glassy carbon electrode for alkali metal cation recognition. Journal of Electroanalytical Chemistry, 2004, 563, 249-255.	3.8	66
8	Organicâ€“inorganic mesoporous silica nanostrands for ultrafine filtration of spherical nanoparticles. Chemical Communications, 2010, 46, 3917.	4.1	62
9	Observation of Molecular Association at Liquid/Liquid and Solid/Liquid Interfaces by Second Harmonic Generation Spectroscopy. Journal of Physical Chemistry B, 2000, 104, 12091-12094.	2.6	52
10	Acidâ^'Base Equilibria inside Amine-Functionalized Mesoporous Silica. Analytical Chemistry, 2011, 83, 2939-2946.	6.5	46
11	Functionalization of mesoporous silica membrane with a Schiff base fluorophore for Cu(II) ion sensing. Analytica Chimica Acta, 2011, 696, 94-100.	5.4	41
12	Rapid fabrication of electrochemical enzyme sensor chip using polydimethylsiloxane microfluidic channel. Analytica Chimica Acta, 2002, 468, 143-152.	5.4	39
13	Local Environments of Coumarin Dyes within Mesostructured Silicaâ^'Surfactant Nanocomposites. Journal of Physical Chemistry B, 2006, 110, 3910-3916.	2.6	37
14	Properties of A Metal Clad Waveguide Sensor Based on A Nanoporous-Metal-Oxide/Metal Multilayer Film. Analytical Chemistry, 2010, 82, 6066-6073.	6.5	36
15	Longitudinal diffusion behavior of hemicyanine dyes across phospholipid vesicle membranes as studied by second-harmonic generation and fluorescence spectroscopies. Analytical and Bioanalytical Chemistry, 2006, 386, 627-632.	3.7	32
16	Direct Observation of Alkali Metal Ion Recognition Processes at the Heptane/Water Interface by Second Harmonic Generation Spectroscopy. Journal of Physical Chemistry B, 2002, 106, 9906-9911.	2.6	31
17	Mesoporous silica hybrid membranes for precise size-exclusive separation of silver nanoparticles. Journal of Colloid and Interface Science, 2011, 355, 348-358.	9.4	31
18	Solvation Dynamics of Coumarin 153 in Alcohols Confined in Silica Nanochannels. Journal of Physical Chemistry A, 2008, 112, 11535-11542.	2.5	30

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19	Encapsulation of catalase into nanochannels of an inorganic composite membrane. Journal of Molecular Catalysis B: Enzymatic, 2009, 57, 183-187.	1.8	30
20	Glucose Sensing Based on Interdigitated Array Microelectrode. Analytical Sciences, 2001, 17, 841-846.	1.6	28
21	Enzyme catalytic membrane based on a hybrid mesoporous membrane. Chemical Communications, 2008, , 853-855.	4.1	28
22	Diffusion of Metal Complexes Inside of Silicaâ^'Surfactant Nanochannels within a Porous Alumina Membrane. Journal of Physical Chemistry B, 2008, 112, 2024-2030.	2.6	28
23	Fabrication and Analytical Applications of Hybrid Mesoporous Membranes. Analytical Sciences, 2008, 24, 25-30.	1.6	27
24	Diffusivities of Tris(2,2'-bipyridyl)ruthenium inside Silica-Nanochannels Modified with Alkylsilanes. Analytical Sciences, 2006, 22, 1501-1507.	1.6	25
25	Electrochemical enzymatic biosensor with long-term stability using hybrid mesoporous membrane. Analyst, The, 2014, 139, 4654-4660.	3.5	25
26	Grafting of phenylboronic acid on a glassy carbon electrode and its application as a reagentless glucose sensor. Journal of Electroanalytical Chemistry, 2011, 656, 192-197.	3.8	24
27	Transparent nanoporous tin-oxide film electrode fabricated by anodization. Thin Solid Films, 2011, 519, 2415-2420.	1.8	24
28	Deposition of Polyelectrolyte Multilayer Film on a Nanoporous Alumina Membrane for Stable Label-Free Optical Biosensing. Journal of Physical Chemistry C, 2012, 116, 23533-23539.	3.1	24
29	Template Synthesis of Arrays of One-dimensional Gold Nanowires Standing on a Carbon Film. Chemistry Letters, 2006, 35, 1352-1353.	1.3	22
30	Electrochemical synthesis of Au/polyanilineâ€“poly(4-styrenesulfonate) hybrid nanoarray for sensitive biosensor design. Electrochemistry Communications, 2008, 10, 1090-1093.	4.7	22
31	Probing structureâ€“function relationships in early events in photosynthesis using a chimeric photocomplex. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10906-10911.	7.1	22
32	Extraction mechanisms of charged organic dye molecules into silica-surfactant nanochannels in a porous alumina membrane. Analytica Chimica Acta, 2006, 556, 157-163.	5.4	21
33	Enhancement of Surface Plasmon Resonance Sensing for DNA Hybridization Using Colloidal Au Attached Probe DNA. Chemistry Letters, 2002, 31, 190-191.	1.3	19
34	High Sensitivity and Large Dynamic Range Surface Plasmon Resonance Sensing for DNA Hybridization Using Au-Nanoparticle-Attached Probe DNA. Japanese Journal of Applied Physics, 2005, 44, L1544-L1546.	1.5	17
35	Permeation Flux of Organic Molecules through Silica-surfactant Nanochannels in a Porous Alumina Membrane. Analytical Sciences, 2006, 22, 1495-1500.	1.6	16
36	Enhanced fluorescence in a nanoporous waveguide and its quantitative analysis. Optics Express, 2012, 20, 12850.	3.4	16

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37	Microviscosity of Supercooled Water Confined within Aminopropyl-modified Mesoporous Silica as Studied by Time-resolved Fluorescence Spectroscopy. Analytical Sciences, 2012, 28, 1065-1070.	1.6	15
38	High-performance bioelectrocatalysts created by immobilization of an enzyme into carbon-coated composite membranes with nano-tailored structures. Journal of Materials Chemistry A, 2017, 5, 20244-20251.	10.3	15
39	Structural Characterization of Myoglobin Molecules Adsorbed within Mesoporous Silicas. Journal of Physical Chemistry C, 2018, 122, 15567-15574.	3.1	13
40	Resonant Second Harmonic Spectroscopy of Rhodamine B Adsorbed onto Fused Silica.. Analytical Sciences, 1997, 13, 85-88.	1.6	12
41	Photo-electrochemical Deposition of Platinum on TiO2with Resolution of Twenty Nanometers using a Mask Elaborated with Electron-Beam Lithography. Japanese Journal of Applied Physics, 2001, 40, 4246-4251.	1.5	12
42	Solvation Dynamics at the Water/Mica Interface as Studied by Time-resolved Fluorescence Spectroscopy. Chemistry Letters, 2005, 34, 988-989.	1.3	12
43	Use of porous anodic alumina membranes as a nanometre-diameter column for high performance liquid chromatography. Chemical Communications, 2007, , 1160.	4.1	12
44	Adsorption and Desorption Dynamics of Sodium Dodecyl Sulfate at the Octadecylsilane Layer on the Pore Surface of a Mesoporous Silica Film Observed in-situ by Optical Waveguide Spectroscopy. Analytical Sciences, 2011, 27, 597-603.	1.6	11
45	Highly sensitive real-time detection of DNA hybridization by using nanoporous waveguide fluorescence spectroscopy. Applied Physics Letters, 2014, 105, .	3.3	10
46	Trinucleotide duplex formation inside a confined nanospace under supercooled conditions. Nature Communications, 2014, 5, 5151.	12.8	10
47	Nanoporous Waveguide Spectroscopy for the Estimation of Enzyme Adsorption on Mesoporous Silica. Analytical Sciences, 2017, 33, 473-476.	1.6	10
48	Characterization of Myoglobin Adsorption into Mesoporous Silica Pores by Differential Scanning Calorimetry. Analytical Sciences, 2018, 34, 1393-1399.	1.6	9
49	Anion Recognition at the Solid/Liquid Interface as Studied by Second Harmonic Generation Spectroscopy. Chemistry Letters, 2003, 32, 798-799.	1.3	8
50	Structural Stability of Light-harvesting Protein LH2 Adsorbed on Mesoporous Silica Supports. Analytical Sciences, 2015, 31, 1069-1074.	1.6	8
51	Separation of adenine, adenosine-5â€²-monophosphate and adenosine-5â€²-triphosphate by fluidic chip with nanometre-order diameter columns inside porous anodic alumina using an aqueous mobile phase. Lab on A Chip, 2009, 9, 1337.	6.0	7
52	Alumina Plate Containing Photosystem I Reaction Center Complex Oriented inside Plate-Penetrating Silica Nanopores. Journal of Physical Chemistry B, 2013, 117, 9785-9792.	2.6	7
53	Mesoporous Materials toward Nanofabricator and Nanoreactor. Electrochemistry, 2010, 78, 105-113.	1.4	6
54	Differential Scanning Calorimetry Study on the Adsorption of Myoglobin at Mesoporous Silicas: Effects of Solution pH and Pore Size. ACS Omega, 2020, 5, 22993-23001.	3.5	6

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55	High-Performance Bio-Sensor with Enzymes Immobilized on Mesoporous Membranes: Nanosized Pores Just Corresponding to the Size of an Enzyme Improve the Stability of the Sensor Drastically. Advanced Porous Materials, 2016, 4, 157-165.	0.3	6
56	Construction of DNA-Au Nanoparticles Multilayer and Its Application to Detection of DNA Hybridization. Japanese Journal of Applied Physics, 2004, 43, 2767-2770.	1.5	5
57	Effect of Cavity Size of Mesoporous Silica on Short DNA Duplex Stability. Langmuir, 2018, 34, 5545-5550.	3.5	5
58	Giant Carbon Nano-Test Tubes as Versatile Imaging Vessels for High-Resolution and In Situ Observation of Proteins. ACS Applied Materials & Interfaces, 2022, 14, 26507-26516.	8.0	5
59	Encapsulation of PEG-modified Myoglobin in Hydrophobic Mesoporous Silica as Studied by Optical Waveguide Spectroscopy. Analytical Sciences, 2013, 29, 187-192.	1.6	4
60	Structural Characterization of Proteins Adsorbed at Nanoporous Materials. Analytical Sciences, 2021, 37, 49-59.	1.6	4
61	Effect of Cavity Size of Mesoporous Silica on Type 1 Copper Site Geometry in Pseudoazurin. Bulletin of the Chemical Society of Japan, 2020, 93, 630-636.	3.2	4
62	Utilization of Nanometre-order Diameter Columns inside Porous Anodic Alumina for Chromatography Chip System. Chemistry Letters, 2008, 37, 18-19.	1.3	3
63	Inclusion Complexation of Î³-Cyclodextrin and Coumarin Dye inside Alumina Nanopores over a Temperature Range of 303â€“233 K. Journal of Physical Chemistry C, 2013, 117, 17567-17573.	3.1	3
64	Solid-State Photophysical Properties of Chiral Perylene Diimide Derivatives: AIEnh-Circularly Polarized Luminescence from Vacuum-Deposited Thin Films. Bulletin of the Chemical Society of Japan, 2022, 95, 751-758.	3.2	3
65	Adsorption Behavior of Lauric Acid at Heptane/Water Interface as Studied by Second Harmonic Generation Spectroscopy and Interfacial Tensiometry. Analytical Sciences, 2004, 20, 1523-1527.	1.6	2
66	Integration of mesostructured silica with bathophenanthroline into a porous alumina membrane by one-pot synthesis method. Microporous and Mesoporous Materials, 2008, 113, 139-145.	4.4	2
67	Stability of Hairpin Structure of (CCG)₄ Trinucleotide Repeats inside Amine-functionalized Silica Mesopores. Chemistry Letters, 2016, 45, 1425-1427.	1.3	2
68	Collimated microfiber spectroscopy for optical characterization of disordered porous anodic alumina. Applied Physics Express, 2016, 9, 022503.	2.4	2
69	Continuous Mesoporous Aluminum Oxide Film with Perpendicularly Oriented Mesopore Channels. ACS Omega, 2019, 4, 17890-17893.	3.5	2
70	In-situ Neutron Reflectometry Study on Adsorption of Glucose Oxidase at Mesoporous Aluminum Oxide Film. Analytical Sciences, 2020, 36, 1331-1335.	1.6	2
71	Separation, Detection, and Functional Materials. Characterization of molecules and molecular recognition at interfaces.. Bunseki Kagaku, 1999, 48, 1063-1075.	0.2	1
72	Analysis of Associated Structures of Rhodamine B Adsorbed at Interfaces by Second Harmonic Generation Spectroscopy. Bunseki Kagaku, 2006, 55, 457-465.	0.2	1

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73	Structural Regulation of Mesoporous Silica and Characterization of the Microenvironment Inside a Silica Mesopore. Bunseki Kagaku, 2013, 62, 581-588.	0.2	1
74	Thermodynamics of Complexation between Thiourea-based Receptor and Acetate in Water/Acetonitrile Mixture. Analytical Sciences, 2016, 32, 741-744.	1.6	1
75	Molecular Recognition of Ions at Liquid/Liquid Interfaces. , 2005, , 233-248.		1
76	Characterization of the Inner Space of Mesostructured Silica by Time-Resolved Fluorescence Spectroscopy. Bunseki Kagaku, 2009, 58, 507-516.	0.2	0
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78	Molecular Recognition at Solid/Liquid and Liquid/Liquid Interfaces As Studied by Second Harmonic Generation Spectroscopy. Hyomen Kagaku, 2003, 24, 280-287.	0.0	0