

# Takafumi Aizawa

## List of Publications by Year in descending order

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65  
papers

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567281

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65  
docs citations

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times ranked

1008  
citing authors

#	ARTICLE	IF	CITATIONS
1	Melting point depression of ionic liquids confined in nanospaces. <i>Chemical Communications</i> , 2006, , 1828.	4.1	96
2	Solution Structures of 1-Butyl-3-methylimidazolium Hexafluorophosphate Ionic Liquid Saturated with CO <sub>2</sub> : <sup>Å</sup> Experimental Evidence of Specific Anion <sup>ˆ</sup> CO <sub>2</sub> Interaction. <i>Journal of Physical Chemistry B</i> , 2005, 109, 13847-13850.	2.6	87
3	Supercritical water oxidation of polychlorinated biphenyls using hydrogen peroxide. <i>Chemical Engineering Science</i> , 1999, 54, 3079-3084.	3.8	85
4	Studies on Solute <sup>ˆ</sup> Solvent Interactions in Gaseous and Supercritical Carbon Dioxide by High-Pressure <sup>1</sup> H NMR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2000, 104, 2749-2758.	2.6	73
5	Water-induced Acceleration of Transport Properties in Hydrophobic 1-Butyl-3-methylimidazolium Hexafluorophosphate Ionic Liquid. <i>Chemistry Letters</i> , 2005, 34, 324-325.	1.3	38
6	Direct observation of channel-tee mixing of high-temperature and high-pressure water. <i>Journal of Supercritical Fluids</i> , 2007, 43, 222-227.	3.2	31
7	Relation between Volume Expansion and Hydrogen Bond Networks for CO <sub>2</sub> ˆAlcohol Mixtures at 40 <sup>Å</sup> C. <i>Journal of Physical Chemistry B</i> , 2010, 114, 13628-13636.	2.6	28
8	Determination of Kamlet <sup>ˆ</sup> Taft solvent parameters <sup>ˆ</sup> of high pressure and supercritical water by the UV-Vis absorption spectral shift of 4-nitroanisole. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 2257-2264.	2.8	24
9	Growth process of atomically flat anodic films on titanium under potentiostatical electrochemical treatment in H <sub>2</sub> SO <sub>4</sub> solution. <i>Surface Science</i> , 2007, 601, 5133-5141.	1.9	24
10	Dependence of volume expansion on alkyl chain length and the existence of branched methyl group of CO <sub>2</sub> -expanded ketone systems at 40 <sup>Å</sup> C. <i>Journal of Supercritical Fluids</i> , 2010, 55, 71-76.	3.2	23
11	Development of water vapor transmission rate measuring device using a quadrupole mass spectrometer and standard gas barrier films down to the 10 <sup>ˆ</sup> 6 g m <sup>ˆ</sup> 2 day <sup>ˆ</sup> 1 level. <i>Review of Scientific Instruments</i> , 2017, 88, 043301.	1.3	19
12	High-pressure NMR studies on solvation structure in supercritical carbon dioxide. <i>Fluid Phase Equilibria</i> , 2002, 194-197, 859-868.	2.5	18
13	Liquid Structure of 1-Butyl-3-methylimidazolium Hexafluorophosphate by Neutron Diffraction with H/D Isotopic Substitution Method. <i>Analytical Sciences</i> , 2008, 24, 1373-1376.	1.6	18
14	Analysis of volume expansion mechanism of CO <sub>2</sub> ˆacetate systems at 40 <sup>Å</sup> C. <i>Journal of Supercritical Fluids</i> , 2010, 55, 56-61.	3.2	18
15	Characterization of nanocrystalline indium tin oxide thin films prepared by ion beam sputter deposition method. <i>Thin Solid Films</i> , 2010, 518, 6891-6896.	1.8	17
16	Local density augmentation around acetophenone N,N,N <sup>ˆ</sup> 2,N <sup>ˆ</sup> 2-tetramethylbenzidine exciplex in supercritical water. <i>Chemical Physics Letters</i> , 2004, 393, 31-35.	2.6	14
17	Estimation of Local Density Augmentation and Hydrogen Bonding between Pyridazine and Water under Sub- and Supercritical Conditions Using UV-Vis Spectroscopy. <i>Analytical Sciences</i> , 2006, 22, 1417-1423.	1.6	14
18	Formation of Self-Ordered TiO <sub>2</sub> Nanotubes by Electrochemical Anodization of Titanium in 2-Propanol/NH <sub>4</sub> F. <i>Journal of the Electrochemical Society</i> , 2009, 156, K227.	2.9	14

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19	Correlation between the Porosity and Permeability of a Polymer Filter Fabricated via CO <sub>2</sub> -Assisted Polymer Compression. <i>Membranes</i> , 2020, 10, 391.	3.0	14
20	Determination of the exchange integral by the low-field CIDNP in intramolecular hydrogen abstraction reaction of polymethylene-linked xanthone and xanthene. <i>The Journal of Physical Chemistry</i> , 1992, 96, 4884-4889.	2.9	13
21	One dimensional heat transfer on the thermal diffusion and piston effect of supercritical water. <i>International Journal of Heat and Mass Transfer</i> , 2002, 45, 3673-3677.	4.8	13
22	Development of High-Pressure Electric Conductivity Cell and its Application: Pressure Effect of Carbon Dioxide on Electric Conductivity of Ionic Liquid. <i>Electrochemistry</i> , 2004, 72, 703-705.	1.4	13
23	A new method for producing porous polymer materials using carbon dioxide and a piston. <i>Journal of Supercritical Fluids</i> , 2018, 133, 38-41.	3.2	13
24	Determination of anisotropic solvation structure of octafluorotoluene in supercritical carbon dioxide by means of solvent-induced <sup>19</sup> F NMR chemical shift. <i>Chemical Physics Letters</i> , 2001, 338, 95-100.	2.6	12
25	Temperature Dependence of Local Density Augmentation for Acetophenone/N,N-Dimethyl-N,N'-Tetramethylbenzidine Exciplex in Supercritical Water. <i>Journal of Physical Chemistry A</i> , 2005, 109, 7353-7358.	2.5	12
26	Fabrication of nanostructured titania on flexible substrate by electrochemical anodization. <i>Journal of Power Sources</i> , 2010, 195, 5902-5908.	7.8	12
27	Analysis of Sustained Release Behavior of Drug-Containing Tablet Prepared by CO <sub>2</sub> -Assisted Polymer Compression. <i>Polymers</i> , 2018, 10, 1405.	4.5	12
28	The effect of the Coulomb force on the diffusional motion of radicals as studied by the solvent permittivity dependence of the CIDNP intensity. <i>Chemical Physics Letters</i> , 1992, 195, 16-20.	2.6	11
29	Fabrication of porosity-controlled polyethylene terephthalate porous materials using a CO <sub>2</sub> -assisted polymer compression method. <i>RSC Advances</i> , 2018, 8, 3061-3068.	3.6	11
30	Local density augmentation from fluorescence lifetime for anthracene N,N-dimethylaniline exciplex in supercritical carbon dioxide. <i>Chemical Physics Letters</i> , 2002, 357, 168-172.	2.6	10
31	Determination of fluid density confined in nanopore by means of NMR spectroscopy. <i>Chemical Physics Letters</i> , 2005, 408, 344-347.	2.6	10
32	Proton concentration of supercritical water and high-concentrated carbon dioxide mixture using UV-vis spectroscopy. <i>Fluid Phase Equilibria</i> , 2007, 257, 177-182.	2.5	10
33	Effect of CO <sub>2</sub> dissolution on electrical conductivity and self-diffusion coefficients of 1-butyl-3-methylimidazolium hexafluorophosphate ionic liquid. <i>Fluid Phase Equilibria</i> , 2013, 357, 76-79.	2.5	10
34	Numerical simulation of two-dimensional piston effect and natural convection in a square cavity heated from one side. <i>International Communications in Heat and Mass Transfer</i> , 2004, 31, 151-160.	5.6	9
35	Development of Clay-based Film and Its Application to Gas Barrier Layers of Composite Tanks. <i>Journal of the Japan Petroleum Institute</i> , 2017, 60, 121-126.	0.6	9
36	Peel and Penetration Resistance of Porous Polyethylene Terephthalate Material Produced by CO <sub>2</sub> -Assisted Polymer Compression. <i>Molecules</i> , 2019, 24, 1384.	3.8	9

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37	â€œTotsuâ€ window optical cell for absorption and emission studies of high-pressure liquids and supercritical fluids. <i>Journal of Supercritical Fluids</i> , 2004, 29, 313-317.	3.2	8
38	Corrosion on continuous supercritical water oxidation for polychlorinated biphenyls. <i>High Pressure Research</i> , 2001, 20, 393-401.	1.2	7
39	Pressure dependence of acetophenone N,N,Nâ€™,Nâ€™-tetramethylbenzidine exciplex in supercritical carbon dioxide. <i>Chemical Physics Letters</i> , 2002, 354, 298-302.	2.6	7
40	Liquid structures of 1-butyl-3-methylimidazolium tetrafluoroborate and carbon dioxide mixtures by X-ray diffraction measurements. <i>Fluid Phase Equilibria</i> , 2010, 297, 183-186.	2.5	7
41	Process Development of CO <sub>2</sub> -Assisted Polymer Compression for High Productivity: Improving Equipment and the Challenge of Numbering-Up. <i>Technologies</i> , 2019, 7, 39.	5.1	7
42	Novel Strategy for Fabricating Multilayer Porous Membranes with Varying Porosity. <i>ACS Omega</i> , 2020, 5, 24461-24466.	3.5	7
43	A Unique Concentration Dependence of NMR Longitudinal Relaxation Time of Water in Supercritical Carbon Dioxide. <i>Chemistry Letters</i> , 2000, 29, 1320-1321.	1.3	5
44	Temperature dependence of local density augmentation around exciplex in supercritical carbon dioxide. <i>Fluid Phase Equilibria</i> , 2004, 219, 37-40.	2.5	5
45	Local density augmentation of excited 1-(dimethylamino)naphthalene in supercritical water. <i>Journal of Supercritical Fluids</i> , 2006, 39, 206-210.	3.2	5
46	Flow Visualization and Numerical Simulation of T-Junction Mixing of High-Temperature High-Pressure Water. <i>Journal of Chemical Engineering of Japan</i> , 2009, 42, 64-70.	0.6	5
47	<sup>19</sup> F NMR chemical shifts of CF <sub>4</sub> in CO <sub>2</sub> over a wide pressure range at different temperatures. <i>Magnetic Resonance in Chemistry</i> , 2003, 41, 75-76.	1.9	4
48	Direct Evidence of Ion-dipole Interaction between Imidazolium Cations and Polar Molecules in Ionic Liquid Solutions by Means of Mass Spectrometric Analysis of Clusters. <i>Chemistry Letters</i> , 2005, 34, 706-707.	1.3	4
49	Phase Behavior of Xe Confined in Porous Vycor Glass Probed by <sup>129</sup> Xe NMR Chemical Shift. <i>Journal of the Physical Society of Japan</i> , 2006, 75, 024603.	1.6	4
50	Molecular motility and affinity of expanded carbon dioxide+ketone systems analyzed by molecular dynamics simulations. <i>Fluid Phase Equilibria</i> , 2010, 297, 172-177.	2.5	4
51	Acceleration of chemical reaction by AOT micelles under supercritical conditions. <i>Chemical Engineering Science</i> , 1999, 54, 2859-2864.	3.8	3
52	Cosolvent effect on enhancement of reaction rate constant in near-critical region. <i>Journal of Supercritical Fluids</i> , 2003, 27, 247-253.	3.2	3
53	New Design Method for Fabricating Multilayer Membranes Using CO <sub>2</sub> -Assisted Polymer Compression Process. <i>Molecules</i> , 2020, 25, 5786.	3.8	3
54	Fabrication of Enzyme-Loaded Cartridges Using CO <sub>2</sub> -Assisted Polymer Compression. <i>Technologies</i> , 2021, 9, 85.	5.1	3

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55	Direct analysis of hydrogen transfer reaction from p-benzosemiquinone radical to p-benzoquinone by time-resolved CIDNP method. <i>Spectrochimica Acta Part A: Molecular Spectroscopy</i> , 1994, 50, 1443-1450.	0.1	2
56	An In Situ High-Pressure NMR Study of Hydrogen Bonding of Alcohols in Supercritical Carbon Dioxide.. <i>Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu</i> , 1998, 7, 1426-1428.	0.0	2
57	NMR Spectroscopy of Compressed Fluids in Nanopore. <i>Bunseki Kagaku</i> , 2005, 54, 565-568.	0.2	2
58	Nanostructure of Pure Iron Anodically Oxidized in Borate Buffer Solution and Annealed by Infrared Radiation. <i>Journal of Nanoscience and Nanotechnology</i> , 2008, 8, 493-502.	0.9	2
59	NMR Studies on Solution Structures of Methanol and Ethanol Saturated with CO <sub>2</sub> . <i>Journal of Solution Chemistry</i> , 2014, 43, 1539-1549.	1.2	2
60	Temperature dependence of gas barrier property of clay-polymer composite coatings. <i>Applied Clay Science</i> , 2022, 226, 106571.	5.2	2
61	Noncatalytic organic rearrangement using supercritical water. <i>High Pressure Research</i> , 2001, 20, 155-166.	1.2	1
62	Analysis of Restitution Coefficient and Hardness of CO <sub>2</sub> -Assisted Polymer Compression Products. <i>Journal of Chemical Engineering of Japan</i> , 2021, 54, 463-466.	0.6	1
63	Application of CO <sub>2</sub> -Assisted Polymer Compression to Polylactic Acid and the Relationship between Crystallinity and Plasticization. <i>Compounds</i> , 2021, 1, 75-82.	1.9	1
64	NMR studies on supercritical fluids in nanoporous materials. <i>E-Journal of Surface Science and Nanotechnology</i> , 2005, 3, 338-340.	0.4	1
65	Multi-Step Passivation of Titanium in Dilute Sulphuric Acid. <i>Journal of the Electrochemical Society</i> , 2011, 158, C379.	2.9	0