Mitsuhiro Hirai

List of Publications by Year
in descending order

96 papers	1,610 citations	257357 24 h-index	330025 37 g-index
98 all docs	98 docs citations	98 times ranked	1254 citing authors

#	Article	IF	Citations
1	Electrostriction of highly swollen polymer gel: Possible application for gel actuator. Journal of Applied Polymer Science, 1994, 53, 79-84.	1.3	86
2	Characteristics of AOT Microemulsion Structure Depending on Apolar Solvents. Journal of Physical Chemistry B, 1999, 103, 9658-9662.	1.2	81
3	Aerosol-OT Reversed Micellar Formation at Low Water-Surfactant Ratio Studied by Synchrotron Radiation Small-Angle X-ray Scattering. The Journal of Physical Chemistry, 1995, 99, 6652-6660.	2.9	76
4	Determination of Asymmetric Structure of Ganglioside-DPPC Mixed Vesicle Using SANS, SAXS, and DLS. Biophysical Journal, 2003, 85, 1600-1610.	0.2	73
5	Reversibility and Hierarchy of Thermal Transition of Hen Egg-White Lysozyme Studied by Small-Angle X-Ray Scattering. Biophysical Journal, 1999, 76, 2192-2197.	0.2	72
6	Structural hierarchy of several proteins observed by wide-angle solution scattering. Journal of Synchrotron Radiation, 2002, 9, 202-205.	1.0	59
7	Structural change of jack bean urease induced by addition surfactants studied with synchrotron-radiation small-angle X-ray scattering. FEBS Journal, 1993, 215, 55-61.	0.2	57
8	Hierarchical Map of Protein Unfolding and Refolding at Thermal Equilibrium Revealed by Wide-Angle X-ray Scattering. Biochemistry, 2004, 43, 9036-9049.	1.2	49
9	Polyurethane-elastomer-actuator. Angewandte Makromolekulare Chemie, 1996, 240, 221-229.	0.3	46
10	Collapse of the hydration shell of a protein prior to thermal unfolding. Journal of Applied Crystallography, 2007, 40, s175-s178.	1.9	46
11	Structure and reactivity of aerosol-OT reversed micelles containing Î±-chymotrypsin. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 1081-1089.	1.7	43
12	Small-Angle X-ray Scattering and Calorimetric Studies of Thermal Conformational Change of Lysozyme Depending on pH. Journal of Physical Chemistry B, 1998, 102, 1308-1313.	1.2	43
13	Direct Evidence for the Effect of Glycerol on Protein Hydration and Thermal Structural Transition. Biophysical Journal, 2018, 115, 313-327.	0.2	39
14	Glycolipid based cubic nanoparticles: preparation and structural aspects. Colloids and Surfaces B: Biointerfaces, 2004, 35, 107-118.	2.5	38
15	Polymer-Dispersed Bicontinuous Cubic Glycolipid Nanoparticles. Biotechnology Progress, 2008, 21, 255-262.	1.3	38
16	Thermotropic Structural Change of Disialoganglioside Micelles Studied by Using Synchrotron Radiation Small-Angle X-ray Scattering. The Journal of Physical Chemistry, 1996, 100, 11675-11680.	2.9	37
17	Sugar-Mediated Stabilization of Protein against Chemical or Thermal Denaturation. Journal of Physical Chemistry B, 2018, 122, 8685-8697.	1.2	37
18	Intensive Extrusion and Occlusion of Water in Ganglioside Micelles with Thermal Reversibility. Biophysical Journal, 1998, 74, 3010-3014.	0.2	36

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19	Complementary Analysis of Thermal Transition Multiplicity of Hen Egg-White Lysozyme at Low pH Using X-ray Scattering and Scanning Calorimetry. Journal of Physical Chemistry B, 1999, 103, 549-556.	1.2	36
20	Intermicellar interaction of ganglioside aggregates and structural stability on pH variation. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 4533.	1.7	33
21	Bending Deformation of Monolayer Polyurethane Film Induced by an Electric Field. Chemistry Letters, 1997, 26, 773-774.	0.7	31
22	Hydration and thermal reversibility of glycolipids depending on sugar chains. European Biophysics Journal, 2002, 31, 62-72.	1.2	29
23	An Assay of Ganglioside Using Fluorescence Image Analysis on a Thin-Layer Chromatography Plate. Analytical Chemistry, 2003, 75, 6728-6731.	3.2	26
24	Protective action of trehalose and glucose on protein hydration shell clarified by using X-ray and neutron scattering. Physica B: Condensed Matter, 2018, 551, 249-255.	1.3	26
25	Electrically induced reversible structural change of a highly swollen polymer gel network. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 473.	1.7	25
26	Interparticle interactions and structural changes of nucleosome core particles in low-salt solution. Biochemistry, 1988, 27, 7924-7931.	1.2	23
27	Growing Process of Scattering Density Fluctuation of a Medium Distance in the Hydrogel of Poly(vinyl alcohol) under Stretching. Macromolecules, 1994, 27, 1003-1006.	2.2	23
28	Interaction of Gangliosides with Proteins Depending on Oligosaccharide Chain and Protein Surface Modification. Biophysical Journal, 1998, 74, 1380-1387.	0.2	23
29	Kinetic Asymmetry of Subunit Exchange of Homooligomeric Protein as Revealed by Deuteration-Assisted Small-Angle Neutron Scattering. Biophysical Journal, 2011, 101, 2037-2042.	0.2	20
30	Thermal Induced Modulation of Surface Charge of Sialoglycosphingolipid Micelles. Journal of Physical Chemistry B, 1999, 103, 10136-10142.	1.2	19
31	Bilayer structure of ganglioside/cholesterol mixed system in the presence of Ca2+. Journal of Applied Crystallography, 2003, 36, 489-493.	1.9	19
32	Structure of raft-model membrane by using the inverse contrast variation neutron scattering method. Physica B: Condensed Matter, 2006, 385-386, 868-870.	1.3	18
33	Change of dynamics of raft-model membrane induced by amyloid-Î² protein binding. European Physical Journal E, 2013, 36, 74.	0.7	18
34	Conformational characterization of a protein complex involving intrinsically disordered protein by small-angle neutron scattering using the inverse contrast matching method: a case study of interaction between Î±-synuclein and PbaB tetramer as a model chaperone. Journal of Applied Crystallography, 2014, 47, 430-435.	1.9	18
35	Effect of Protein-Encapsulation on Thermal Structural Stability of Liposome Composed of Glycosphingolipid/Cholesterol/Phospholipid. Journal of Physical Chemistry B, 2015, 119, 3398-3406.	1.2	18
36	Characteristics of thermotropic phase transition of glycosphingolipid (Ganglioside) aggregates in aqueous solution. Thermochimica Acta, 1998, 308, 93-99.	1.2	16

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37	PH-induced structure change of poly(vinyl alcohol) hydrogel crosslinked with poly(acrylic acid). Angewandte Makromolekulare Chemie, 1996, 240, 213-219.	0.3	15
38	Study of the conformational change of amylose induced by complexation with iodine using synchrotron x-ray small-angle scattering. Macromolecules, 1992, 25, 6699-6702.	2.2	14
39	Effect of branching of amylopectin on complexation with iodine as steric hindrance. Polymer, 1994, 35, 2222-2225.	1.8	14
40	Structure of liposome encapsulating proteins characterized by X-ray scattering and shell-modeling. Journal of Synchrotron Radiation, 2013, 20, 869-874.	1.0	12
41	Concentration dependence of thermal structural transition of hen egg-white lysozyme under constant heating rate studied by time-resolved SAXS. Thermochimica Acta, 2000, 344, 95-102.	1.2	11
42	Salt-dependent phase behaviour of the phosphatidylinositol 4,5-diphosphateâ€“water system. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 1493-1498.	1.7	10
43	Conformational selection of the intrinsically disordered plant stress protein COR15A in response to solution osmolarity â€“ an X-ray and light scattering study. Physical Chemistry Chemical Physics, 2019, 21, 18727-18740.	1.3	10
44	Permeability of water through a raft model membrane clarified by time-resolved SANS and SAXS. Journal of Applied Crystallography, 2006, 40, s159-s164.	1.9	9
45	Morphology transition of raft-model membrane induced by osmotic pressure: Formation of double-layered vesicle similar to an endo- and/or exocytosis. Journal of Physics: Conference Series, 2010, 247, 012018.	0.3	9
46	Elongation of Ganglioside (GD1a) Micellar Structure Depending on Cholesterol Content. Molecular Crystals and Liquid Crystals, 2001, 367, 631-640.	0.3	8
47	Initial process of amyloid formation of apomyoglobin and effect of glycosphingolipid GM1. Journal of Applied Crystallography, 2007, 40, s184-s189.	1.9	8
48	Preferential Intercalation of Human Amyloid-Î² Peptide into Interbilayer Region of Lipid-Raft Membrane in Macromolecular Crowding Environment. Journal of Physical Chemistry B, 2018, 122, 9482-9489.	1.2	8
49	Observation of Protein and Lipid Membrane Structures in a Model Mimicking the Molecular-Crowding Environment of Cells Using Neutron Scattering and Cell Debris. Journal of Physical Chemistry B, 2019, 123, 3189-3198.	1.2	8
50	Thermotropic Phase Transition of Phosphatidylinositol 4,5-Bis(phosphate) Aggregates in Aqueous Solution. The Journal of Physical Chemistry, 1995, 99, 17456-17460.	2.9	7
51	Right- / left-circular orientation of biological macromolecules under magnetic field gradient. Journal of Applied Crystallography, 2003, 36, 520-524.	1.9	6
52	Bending induced by creeping of plasticized poly(vinyl chloride) gel. , 2004, , .		6
53	Magnetic field effects on the structure and molecular behavior of pigeon ironâ€“sulfur protein. Protein Science, 2022, 31, .	3.1	6
54	High-performance permanent magnetic circuit designed for small-angle X-ray scattering using synchrotron radiation source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1994, 340, 620-624.	0.7	5

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55	Structure of Ultrafine Bubbles and Their Effects on Protein and Lipid Membrane Structures Studied by Small- and Wide-Angle X-ray Scattering. Journal of Physical Chemistry B, 2019, 123, 3421-3429.	1.2	5
56	Epithermal and thermal neutron beamline monitor using 6Li glass scintillator. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1987, 259, 497-500.	0.7	4
57	Title is missing!. Die Makromolekulare Chemie, 1993, 194, 2885-2895.	1.1	4
58	Reply to Comment on â€œThermotropic Structural Change of Disialoganglioside Micelles Studied by Using Synchrotron Radiation Small-Angle X-ray Scatteringâ€• Journal of Physical Chemistry B, 1998, 102, 3062-3064.	1.2	4
59	Effect of cations on the structure of sodium bis(2-ethylhexyl)sulfosuccinate water-in-oil microemulsion. Journal of Applied Crystallography, 2007, 40, s274-s278.	1.9	4
60	Thermal unfolding and refolding of protein under osmotic pressure clarified by wide-angle X-ray scattering. Thermochimica Acta, 2012, 532, 15-21.	1.2	4
61	Normalization of grazing-incidence small angle scattering of phospholipid alloy systems at the K absorption edge of phosphorous: A standard sample approach. Japanese Journal of Applied Physics, 2014, 53, 05FH02.	0.8	4
62	Macromolecular crowding effect on protein structure and hydration clarified by using X-ray and neutron scattering. Physica B: Condensed Matter, 2018, 551, 212-217.	1.3	4
63	Restoration of Myoglobin Native Fold from Its Initial State of Amyloid Formation by Trehalose. Journal of Physical Chemistry B, 2018, 122, 11962-11968.	1.2	4
64	Thermal neutron small-angle scattering spectrometer (WIT) using a 2D converging slit and annular glass scintillator detectors at KENS. Physica B: Condensed Matter, 1989, 156-157, 611-614.	1.3	3
65	Essential role of w/o microemulsion structure on catalytic activity of entrapped proteins studied by small-angle X-ray scattering and circular dichroism. Journal of Applied Crystallography, 2003, 36, 530-534.	1.9	3
66	Thermal Unfolding Process of Proteins Depending on Structural Hierarchy Clarified by Wide-Angle X-Ray Scattering at a Third Generation Synchrotron Source. Bunseki Kagaku, 2006, 55, 411-418.	0.1	2
67	Membrane Properties of Dipalmitoyl Bis (monoaclyglycero) phosphate. Membrane, 2007, 32, 221-228.	0.0	2
68	Feasibility of complementary use of neutron and X-ray scattering techniques in research of lipid mixtures. Journal of Physics: Conference Series, 2007, 83, 012003.	0.3	2
69	Effect of osmotic pressure on ganglioside-cholesterol-DOPC lipid mixture. Journal of Physics: Conference Series, 2007, 83, 012016.	0.3	2
70	Frozen State of SephadexÂ® Gels of Different Crosslink Density Analyzed by X-ray Computed Tomography and X-ray Diffraction. Gels, 2018, 4, 44.	2.1	2
71	Prospects for Neutron in Biology at J-PARC (Japan Proton Accelerator Research Complex). Seibutsu Butsuri, 2006, 46, 182-187.	0.0	2
72	Compact Permanent Magnetic Circuit with Periodic Magnetic Field Designed for Studies of Liquid Crystals. Molecular Crystals and Liquid Crystals, 2001, 367, 641-650.	0.3	1

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73	Small-Angle X-Ray Scattering Study of Ganglioside / Dipalmitoylphosphatidylcholine Mixture. Molecular Crystals and Liquid Crystals, 2001, 367, 661-669.	0.3	1
74	Recovery Effects of Trehalose on Acid Denaturation/Aggregation of Proteins. Bunseki Kagaku, 2019, 68, 43-49.	0.1	1
75	Short-Distance Intermolecular Correlations of Mono- and Disaccharides in Condensed Solutions: Bulky Character of Trehalose. ACS Omega, 2020, 5, 10815-10825.	1.6	1
76	Small angle neutron scattering studies of the structure of nucleosome cores at low ionic strength. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1983, 120, 436-439.	0.9	0
77	Response to CantÃ¹ et al.. Biophysical Journal, 1998, 74, 1604-1605.	0.2	0
78	Synchrotron Radiation Small-Angle X-Ray Scattering Study of Structural Transition and Gelation of Hen Egg-White Lysozyme Depending on pH and Ionic Strength under Isothermal Heating.. Kobunshi Ronbunshu, 1998, 55, 653-660.	0.2	0
79	AOT microemulsion structure depending on both apolar solvent and protein concentration. Studies in Surface Science and Catalysis, 2001, 132, 165-168.	1.5	0
80	Small-angle neutron scattering study of w/o AOT microemulsion entrapping proteins. Studies in Surface Science and Catalysis, 2001, 132, 201-204.	1.5	0
81	Comparison of Response of Biological Supermacromolecules to Magnetic Field Depending on Surface Structure. Molecular Crystals and Liquid Crystals, 2001, 367, 651-660.	0.3	0
82	2P286 Structure and Dynamics of Raft Model Membrane(40. Membrane structure,Poster) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382 Td	0.0	0
83	2P257 Interacting of ganglioside-contained lipid mixtures with denatured protein clarified by SAXS and WAXS(Native and artificial biomembranes-structure and properties,Poster Presentations). Seibutsu Butsuri, 2007, 47, S177.	0.0	0
84	2P258 Effect of polyvinylpyrrolidone on the structure of ganglioside/cholesterol/dioleoylphosphatidylcholine mixtures(Native and artificial) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 297 Td (biomem	0.0	0
85	2P080 Effect of Osmotic Pressure On Unfolding-Refolding of Globular ProteinClarified by Wide-Angle X-ray Scattering(Proteins-stability, folding, and other physicochemical properties,Poster) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	0.0	0
86	2P-233 Slow dynamics of raft model membrane composed of glycosphingolipid, cholesterol and phospholipid by using neutron spin echo(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S111.	0.0	0
87	1P-234 A wide-angle X-ray scattering study of influence of PVP on the structure of large unilamellar vesicles containing glycosphingolipid(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S57.	0.0	0
88	Recent Development and Prospects of Neutron Scattering Study of Biomaterials Mainly on Biomembrane. Journal of the Vacuum Society of Japan, 2010, 53, 739-746.	0.3	0
89	1SH0925 Prospects of Structural Hierarchy Studies of Proteins and Bio-membranes using Pulsed Neutron Scattering(1SH A New Break of Dawn of "Neutrons in Biology"-New Prospects of Neutron) Tj ETQq1 1 0.784314 rgBT /Overlock 2010, 50, S4.	0.0	0
90	1A1524 Structure and thermal stability of liposomes entrapping proteins(Biol & Artifi memb 1:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Seibutsu Butsuri, 2011, 51, S28.	0.0	0

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91	Small-angle Scattering of Biological Materials (Basis of Scattering Data Analysis). Hamon, 2012, 22, 71-79.	0.0	0
92	1P211 Structures of liposome encapsulating proteins under the osmotic pressure(13A.Biological &) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.0	0
93	1P026 Crowding effect on thermal transition of proteins clarified by SR-WAXS(01B. Protein:Structure) Tj ETQq1 1 0.784314 rgBT /Ov	0.0	0
94	Invitation to SR X-ray and Neutron Solution Scattering Structure Analysis of Biological Macromolecules and Those Assemblies. Seibutsu Butsuri, 2000, 40, 270-273.	0.0	0
95	Crystal Structures of Lipids by the Intermolecular Energy Calculation.. Journal of Chemical Software, 1996, 3, 29-36.	0.2	0
96	Analysis of Biomembrane Structure and its Interaction with Proteins by the Complementary Use of Neutron and Synchrotron Radiation X-ray. Oleoscience, 2016, 16, 473-486.	0.0	0