Changwoo Do

List of Publications by Year
in descending order

104	1,935	257450 24	302126 39
papers	citations	h-index	g-index

109	109	109	2925
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Polymer Chain Shape of Poly(3-alkylthiophenes) in Solution Using Small-Angle Neutron Scattering. Macromolecules, 2013, 46, 1899-1907.	4.8	197
2	The suite of small-angle neutron scattering instruments at Oak Ridge National Laboratory. Journal of Applied Crystallography, 2018, 51, 242-248.	4.5	115
3	Hysteresisâ€Free Nanoparticleâ€Reinforced Hydrogels. Advanced Materials, 2022, 34, e2108243.	21.0	92
4	Water-Redispersible Isolated Single-Walled Carbon Nanotubes Fabricated by Inâ€‰Situ Polymerization of Micelles. Advanced Materials, 2007, 19, 929-933.	21.0	80
5	Thermal Fluctuation and Elasticity of Lipid Vesicles Interacting with Pore-Forming Peptides. Physical Review Letters, 2010, 105, 038101.	7.8	75
6	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Li</mml:mi><mml:mo>+</mml:mo></mml:msup></mml:math>Transport in Poly(Ethylene Oxide) Based Electrolytes: Neutron Scattering, Dielectric Spectroscopy, and Molecular Dynamics Simulations. Physical Review Letters, 2013, 111, 018301.	7.8	71
7	Correlating high power conversion efficiency of PTB7:PC₇₁BM inverted organic solar cells with nanoscale structures. Nanoscale, 2015, 7, 15576-15583.	5.6	54
8	Amidine-Mediated Zwitterionic Ring-Opening Polymerization of N-Alkyl N-Carboxyanhydride: Mechanism, Kinetics, and Architecture Elucidation. Macromolecules, 2016, 49, 1163-1171.	4.8	49
9	Poly(3-hexylthiophene) Molecular Bottlebrushes via Ring-Opening Metathesis Polymerization: Macromolecular Architecture Enhanced Aggregation. ACS Macro Letters, 2013, 2, 761-765.	4.8	48
10	Iridescence in nematics: Photonic liquid crystals of nanoplates in absence of long-range periodicity. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 18322-18327.	7.1	43
11	Atomistic Structure of Bottlebrush Polymers: Simulations and Neutron Scattering Studies. Macromolecules, 2014, 47, 5808-5814.	4.8	42
12	Surpassing the stiffness-extensibility trade-off of elastomers via mastering the hydrogen-bonding clusters. Matter, 2022, 5, 237-252.	10.0	40
13	Understanding How Processing Additives Tune the Nanoscale Morphology of High Efficiency Organic Photovoltaic Blends: From Casting Solution to Spunâ€Cast Thin Film. Advanced Functional Materials, 2014, 24, 6647-6657.	14.9	39
14	Noncanonical Head-to-Head Hairpin DNA Dimerization Is Essential for the Synthesis of Orange Emissive Silver Nanoclusters. ACS Nano, 2020, 14, 8697-8706.	14.6	36
15	Organic Solvent-Redispersible Isolated Single Wall Carbon Nanotubes Coated by in-Situ Polymerized Surfactant Monolayer. Macromolecules, 2008, 41, 3261-3266.	4.8	35
16	Charged Rodâ€Like Nanoparticles Assisting Singleâ€Walled Carbon Nanotube Dispersion in Water. Advanced Functional Materials, 2008, 18, 2685-2691.	14.9	32
17	drtsans: The data reduction toolkit for small-angle neutron scattering at Oak Ridge National Laboratory. SoftwareX, 2022, 19, 101101.	2.6	32
18	Reduction-Triggered Self-Assembly of Nanoscale Molybdenum Oxide Molecular Clusters. Journal of the American Chemical Society, 2016, 138, 10623-10629.	13.7	31

#	Article	IF	Citations
19	Deuteration and Polymers: Rich History with Great Potential. Macromolecules, 2021, 54, 3555-3584.	4.8	31
20	Thermally Switchable One- and Two-Dimensional Arrays of Single-Walled Carbon Nanotubes in a Polymeric System. Journal of the American Chemical Society, 2009, 131, 16568-16572.	13.7	29
21	Phosphatidylinositol 4,5-Bisphosphate Clusters the Cell Adhesion Molecule CD44 and Assembles a Specific CD44-Ezrin Heterocomplex, as Revealed by Small Angle Neutron Scattering. Journal of Biological Chemistry, 2015, 290, 6639-6652.	3.4	29
22	Single-walled carbon nanotube induced re-entrant hexagonal phases in a Pluronic block copolymer system. Soft Matter, 2013, 9, 3050.	2.7	28
23	Structural Evolution of Polylactide Molecular Bottlebrushes: Kinetics Study by Size Exclusion Chromatography, Small Angle Neutron Scattering, and Simulations. ACS Macro Letters, 2014, 3, 862-866.	4.8	26
24	Decoupling Poly(3-alkylthiophenes)â€™ Backbone and Side-Chain Conformation by Selective Deuteration and Neutron Scattering. Macromolecules, 2020, 53, 11142-11152.	4.8	26
25	Deciphering Melatonin-Stabilized Phase Separation in Phospholipid Bilayers. Langmuir, 2019, 35, 12236-12245.	3.5	25
26	Understanding inelastically scattered neutrons from water on a time-of-flight small-angle neutron scattering (SANS) instrument. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 737, 42-46.	1.6	24
27	Ion Dynamics in Ionicâ€Liquidâ€Based Liâ€Ion Electrolytes Investigated by Neutron Scattering and Dielectric Spectroscopy. ChemSusChem, 2018, 11, 3512-3523.	6.8	22
28	Structured water in polyelectrolyte dendrimers: Understanding small angle neutron scattering results through atomistic simulation. Journal of Chemical Physics, 2012, 136, 144901.	3.0	21
29	Structural properties of the evolution of CTAB/NaSal micelles investigated by SANS and rheometry. Physical Chemistry Chemical Physics, 2019, 21, 18346-18351.	2.8	21
30	Spatial distribution of intra-molecular water and polymeric components in polyelectrolyte dendrimers revealed by small angle scattering investigations. Journal of Chemical Physics, 2011, 135, 144903.	3.0	16
31	Reconstruction of three-dimensional anisotropic structure from small-angle scattering experiments. Physical Review E, 2017, 96, 022612.	2.1	16
32	Small Angle Scattering Data Analysis Assisted by Machine Learning Methods. MRS Advances, 2020, 5, 1577-1584.	0.9	16
33	SANS Investigation of Selectively Distributed Single-Walled Carbon Nanotubes in a Polymeric Lamellar Phase. Macromolecules, 2010, 43, 5411-5416.	4.8	15
34	Controlling molecular ordering in solution-state conjugated polymers. Nanoscale, 2015, 7, 15134-15141.	5.6	15
35	Influence of side chain isomerism on the rigidity of poly(3-alkylthiophenes) in solutions revealed by neutron scattering. Physical Chemistry Chemical Physics, 2019, 21, 7745-7749.	2.8	15
36	Dynamics of Water Associated with Lithium Ions Distributed in Polyethylene Oxide. Physical Review Letters, 2015, 115, 198301.	7.8	14

#	Article	IF	Citations
37	Silicaâ€“Conjugated Polymer Hybrid Fluorescent Nanoparticles: Preparation by Surface-Initiated Polymerization and Spectroscopic Studies. Journal of Physical Chemistry C, 2018, 122, 6963-6975.	3.1	14
38	Variable-Temperature Scattering and Spectroscopy Characterizations for Temperature-Dependent Solution Assembly of PffBT4T-Based Conjugated Polymers. ACS Applied Polymer Materials, 2022, 4, 3023-3033.	4.4	14
39	Highly Ordered Self-Assembly of 1D Nanoparticles in Phospholipids Driven by Curvature and Electrostatic Interaction. Journal of the American Chemical Society, 2009, 131, 7456-7460.	13.7	13
40	Highly ordered superstructures of single wall carbon nanotubeâ€“liposome complexes. Soft Matter, 2012, 8, 9073.	2.7	13
41	Single-Walled Carbon Nanotube-Induced Lyotropic Phase Behavior of a Polymeric System. Macromolecules, 2012, 45, 986-992.	4.8	13
42	Tunable Encapsulation Structure of Block Copolymer Coated Single-Walled Carbon Nanotubes in Aqueous Solution. Macromolecules, 2015, 48, 3475-3480.	4.8	13
43	Nanostructure enhanced ionic transport in fullerene reinforced solid polymer electrolytes. Physical Chemistry Chemical Physics, 2015, 17, 8266-8275.	2.8	13
44	Long wavelength undulations dominate dynamics in large surfactant membrane patches. Nanoscale, 2015, 7, 2578-2586.	5.6	13
45	Charge segregation in weakly ionized microgels. Physical Review E, 2017, 95, 012608.	2.1	13
46	Scaling Behavior of Anisotropy Relaxation in Deformed Polymers. Physical Review Letters, 2018, 121, 117801.	7.8	13
47	Charge-Dependent Dynamics of a Polyelectrolyte Dendrimer and Its Correlation with Invasive Water. Journal of the American Chemical Society, 2013, 135, 5111-5117.	13.7	12
48	Deep learning-based super-resolution for small-angle neutron scattering data: attempt to accelerate experimental workflow. MRS Communications, 2020, 10, 11-17.	1.8	12
49	Effect of sticker clustering on the dynamics of associative networks. Soft Matter, 2021, 17, 8960-8972.	2.7	12
50	Subdomain Structures of Lamellar and Reverse Hexagonal Pluronic Ternary Systems Investigated by Small Angle Neutron Scattering. Macromolecules, 2009, 42, 2645-2650.	4.8	11
51	Segregation of mass at the periphery ofN-isopropylacrylamide-co-acrylic-acid microgels at high temperatures. Physical Review E, 2015, 92, 030302.	2.1	11
52	Determining Gyration Tensor of Orienting Macromolecules through Their Scattering Signature. Journal of Physical Chemistry Letters, 2019, 10, 3978-3984.	4.6	11
53	Corrections for the geometric distortion of the tube detectors on SANS instruments at ORNL. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 775, 63-70.	1.6	10
54	Aggregation of cyclic polypeptoids bearing zwitterionic end-groups with attractive dipoleâ€“dipole and solvophobic interactions: a study by small-angle neutron scattering and molecular dynamics simulation. Physical Chemistry Chemical Physics, 2017, 19, 14388-14400.	2.8	10

#	Article	IF	Citations
55	Reduced Internal Friction by Osmolyte Interaction in Intrinsically Disordered Myelin Basic Protein. Journal of Physical Chemistry Letters, 2020, 11, 292-296.	4.6	10
56	Revealing the Influence of Salts on the Hydration Structure of Ionic SDS Micelles by Contrast-Variation Small-Angle Neutron Scattering. Journal of Physical Chemistry Letters, 2020, 11, 7334-7341.	4.6	10
57	Orientational Distribution Function of Aligned Elongated Molecules and Particulates Determined from Their Scattering Signature. ACS Macro Letters, 2019, 8, 1257-1262.	4.8	9
58	Machine learning for neutron scattering at ORNL[*]. Machine Learning: Science and Technology, 2021, 2, 023001.	5.0	9
59	CENTAURâ€"The small- and wide-angle neutron scattering diffractometer/spectrometer for the Second Target Station of the Spallation Neutron Source. Review of Scientific Instruments, 2022, 93, .	1.3	9
60	Controlling the Intermediate Structure of an Ionic Liquid for f-Block Element Separations. Journal of Physical Chemistry Letters, 2017, 8, 2049-2054.	4.6	8
61	Molecular dynamics and neutron scattering study of the dependence of polyelectrolyte dendrimer conformation on counterion behavior. Journal of Chemical Physics, 2012, 137, 064902.	3.0	7
62	Dynamical Threshold of Diluteness of Soft Colloids. ACS Macro Letters, 2014, 3, 1271-1275.	4.8	7
63	Small-angle neutron scattering study of a dense microemulsion system formed with an ionic liquid. Soft Matter, 2017, 13, 7154-7160.	2.7	7
64	Self-Assembly of Temperature Sensitive Unilamellar Vesicles by a Blend of Block Copolymers in Aqueous Solution. Polymers, 2019, 11, 63.	4.5	7
65	Quantitative examination of a fundamental assumption in small-angle neutron scattering studies of deformed polymer melts. Polymer, 2020, 204, 122698.	3.8	7
66	Small-angle neutron scattering measurements of Î´-phase deuteride (hydride) precipitates in Zircaloy 4. Journal of Applied Crystallography, 2018, 51, 768-780.	4.5	6
67	Water-Redispersible and Highly Stable Gold Nanoparticles Permanently Capped by Charge-Controllable Surfactants for Potential Medical Applications. ACS Applied Nano Materials, 2019, 2, 7924-7932.	5.0	6
68	Thermoreversible Morphology and Conductivity of a Conjugated Polymer Network Embedded in Block Copolymer Selfâ€Assemblies. Small, 2016, 12, 4857-4864.	10.0	5
69	Anomalistic Self-Assembled Phase Behavior of Block Copolymer Blended with Organic Derivative Depending on Temperature. Macromolecules, 2016, 49, 6541-6548.	4.8	5
70	Methyl quantum tunneling in ionic liquid [DMIm][TFSI] facilitated by Bis(trifluoromethane)sulfonimide lithium salt. Scientific Reports, 2018, 8, 10354.	3.3	5
71	The role of composition in the structure and water-binding in alkali-silica reaction sol and gel. Cement and Concrete Research, 2019, 124, 105814.	11.0	5
72	Dynamic Equivalence between Soft Star Polymers and Hard Spheres. ACS Macro Letters, 2019, 8, 1467-1473.	4.8	5

#	Article	IF	Citations
73	Potentials with smallâ€angle neutron scattering technique for understanding structureâ€“property relation of 3Dâ€printed materials. Polymer Engineering and Science, 2019, 59, E65.	3.1	5
74	Spatial correlations of entangled polymer dynamics. Physical Review E, 2021, 104, 024503.	2.1	5
75	Effect of cholesterol on nano-structural alteration of light-activatable liposomes via laser irradiation: Small angle neutron scattering study. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 641, 128548.	4.7	5
76	Hydration forces between surfaces of surfactant coated single-walled carbon nanotubes. Journal of Chemical Physics, 2013, 138, 114701.	3.0	4
77	Spatial Distributions of Guest Molecule and Hydration Level in Dendrimer-Based Guestâ€“Host Complex. ACS Macro Letters, 2016, 5, 1004-1008.	4.8	4
78	Effect of nucleoside analogue antimetabolites on the structure of PEOâ€“PPOâ€“PEO micelles investigated by SANS. Physical Chemistry Chemical Physics, 2017, 19, 15686-15692.	2.8	4
79	Polyamidoxime chain length drives emergent metal-binding phenomena. Physical Chemistry Chemical Physics, 2019, 21, 554-560.	2.8	4
80	Fingerprinting the nonlinear rheology of a liquid crystalline polyelectrolyte. Rheologica Acta, 2020, 59, 727-743.	2.4	4
81	An exact inversion method for extracting orientation ordering by small-angle scattering. Physical Chemistry Chemical Physics, 2021, 23, 4120-4132.	2.8	4
82	Internal structure of ultralow-crosslinked microgels: From uniform deswelling to phase separation. Physical Review E, 2021, 103, 022614.	2.1	4
83	Self-Assembly of 2D Gold Nanoparticle Superlattice in a Polymer Vesicle Layer Driven by Hydrophobic Interaction. Journal of Physical Chemistry Letters, 2021, 12, 6736-6743.	4.6	4
84	EXPANSE: A time-of-flight EXPanded Angle Neutron Spin Echo spectrometer at the Second Target Station of the Spallation Neutron Source. Review of Scientific Instruments, 2022, 93, .	1.3	4
85	Reciprocal space neutron imaging. Physica B: Condensed Matter, 2006, 385-386, 1402-1404.	2.7	3
86	Conformational effect on small angle neutron scattering behavior of interacting polyelectrolyte solutions: A perspective of integral equation theory. Journal of Chemical Physics, 2012, 137, 024907.	3.0	3
87	A scattering function of star polymers including excluded volume effects. Journal of Applied Crystallography, 2014, 47, 1901-1905.	4.5	3
88	Effects of configurational changes on molecular dynamics in polyvinylidene fluoride and poly(vinylidene fluoride-trifluoroethylene) ferroelectric polymers. Applied Physics Letters, 2015, 107, .	3.3	3
89	Determining population densities in bimodal micellar solutions using contrast-variation small angle neutron scattering. Journal of Chemical Physics, 2020, 153, 184902.	3.0	3
90	Complexation of Pluronic L62 (EO₆â€“(PO₃₄â€“(EO₆/aerosol-OT (sodium bis(2-ethylhexyl)sulfosuccinate) in aqueous solutions investigated by small angle neutron scattering. Physical Chemistry Chemical Physics, 2020, 22, 12524-12531.	2.8	3

#	Article	IF	Citations
91	Small angle scattering of diblock copolymers profiled by machine learning. Journal of Chemical Physics, 2022, 156, 131101.	3.0	3
92	Equilibrium structure of a triblock copolymer system revealed by mesoscale simulation and neutron scattering. Physica B: Condensed Matter, 2013, 430, 87-94.	2.7	2
93	Pronounced Dielectric and Hydration/Dehydration Behaviors of Monopolar Poly(N-alkylglycine)s in Aqueous Solution. Journal of Physical Chemistry B, 2016, 120, 9978-9986.	2.6	2
94	Functionalization of Single-walled Carbon Nanotubes with Thermo-reversible Block Copolymers and Characterization by Small-angle Neutron Scattering. Journal of Visualized Experiments, 2016, , .	0.3	2
95	SANS characterization of time dependent, slow molecular exchange in an SDS micellar system. Physical Chemistry Chemical Physics, 2022, 24, 16988-16996.	2.8	2
96	Impact of Two Water-Miscible Ionic Liquids on the Temperature-Dependent Self-Assembly of the (EO)₆â€“(PO)₃₄â€“(EO)₆ Block Copolymer. ACS Omega, 2022, 7, 19474-19483.	3.5	2
97	Influence of Molecular Solvation on the Conformation of Star Polymers. ACS Macro Letters, 2014, 3, 458-461.	4.8	1
98	Evaluation of molecular volume change of block copolymer depending on temperature: A SANS study. Physica B: Condensed Matter, 2018, 551, 179-183.	2.7	1
99	Kinetically Controlled Formation of Semi-crystalline Conjugated Polymer Nanostructures. Macromolecules, 2021, 54, 2162-2177.	4.8	1
100	Strain heterogeneity in sheared colloids revealed by neutron scattering. Physical Chemistry Chemical Physics, 2018, 20, 6050-6054.	2.8	0
101	Self-Assembled Nanostructure of C60-Amphiphilic Molecules Complex in Aqueous Solution: A Small Angle Neutron Scattering Study. Journal of Nanoscience and Nanotechnology, 2019, 19, 6316-6320.	0.9	0
102	Spatial correlation functions of paracrystals with radial symmetry. Physical Review E, 2020, 102, 032110.	2.1	0
103	Diffusion characteristics of water molecules in a lamellar structure formed by triblock copolymers. Physical Chemistry Chemical Physics, 2022, 24, 8015-8021.	2.8	0
104	Ion Atmosphere of Wormlike Micelles Profiled by Contrast Variation Small-Angle Neutron Scattering. ACS Macro Letters, 2022, 11, 66-71.	4.8	0