Wim Bouwman

List of Publications by Year in descending order

139 papers	3,574 citations	159525 30 h-index	168321 53 g-index
141 all docs	141 docs citations	141 times ranked	2943 citing authors

#	Article	IF	Citations
1	Detailed Structure of Molecularly Thin Polyelectrolyte Multilayer Films on Solid Substrates as Revealed by Neutron Reflectometry. Macromolecules, 1998, 31, 8893-8906.	2.2	555
2	Influence of ether linkages on the structure of double-chain phospholipid monolayers. Chemistry and Physics of Lipids, 1995, 76, 145-157.	1.5	154
3	Separation of Enantiomers and Racemate Formation in Two-Dimensional Crystals at the Water Surface from Racemic Î±-Amino Acid Amphiphiles:Â Design and Structure. Journal of the American Chemical Society, 1997, 119, 933-942.	6.6	109
4	Analysis of spin-echo small-angle neutron scattering measurements. Journal of Applied Crystallography, 2008, 41, 868-885.	1.9	101
5	Spin-echo small angle neutron scattering in Delft. Review of Scientific Instruments, 2005, 76, 033901.	0.6	96
6	Light scattering measurements on microemulsions: Estimation of droplet sizes. International Journal of Pharmaceutics, 2006, 312, 187-195.	2.6	91
7	The Structural Properties of Uncompressed Crystalline Monolayers of Alcohols C_nH_{2n+1} OH (n = 13â€“31) on Water and Their Role as Ice Nucleators. Chemistry - A European Journal, 1995, 1, 304-311.	1.7	84
8	Laser-induced fluorescence spectroscopy of 4-aminobenzonitrile, 4-(N,N-dimethylamino)benzonitrile, and their van der Waals complexes in a supersonic jet. The Journal of Physical Chemistry, 1988, 92, 5449-5455.	2.9	71
9	Fluorescence of gaseous tetraenes and pentaenes. The Journal of Physical Chemistry, 1990, 94, 7429-7434.	2.9	71
10	Real-space interpretation of spin-echo small-angle neutron scattering. Journal of Applied Crystallography, 2003, 36, 117-124.	1.9	71
11	Fabrication of Artificial Opals by Electric-Field-Assisted Vertical Deposition. Langmuir, 2010, 26, 2346-2351.	1.6	56
12	Structural transitions of hard-sphere colloids studied by spin-echo small-angle neutron scattering. Journal of Applied Crystallography, 2003, 36, 1417-1423.	1.9	55
13	Double Stacking Faults in Convectively Assembled Crystals of Colloidal Spheres. Langmuir, 2009, 25, 10408-10412.	1.6	54
14	Self-assembled crystalline monolayers and multilayers of n-alkanes on the water surface. Advanced Materials, 1995, 7, 857-862.	11.1	53
15	On characterization of anisotropic plant protein structures. Food and Function, 2014, 5, 3233-3240.	2.1	51
16	Interpretation of X-ray diffraction patterns of (nuclear) graphite. Carbon, 2014, 69, 17-24.	5.4	51
17	The Kinetics and Mechanism of Long-Range Pore Ordering in Anodic Films on Aluminum. Journal of Physical Chemistry C, 2011, 115, 23726-23731.	1.5	50
18	Elucidation of density profile of self-assembled sitosterol + oryzanol tubules with small-angle neutron scattering. Faraday Discussions, 2012, 158, 223.	1.6	45

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19	Relating water holding of ovalbumin gels to aggregate structure. Food Hydrocolloids, 2016, 52, 87-94.	5.6	44
20	Stability of aqueous food grade fibrillar systems against pH change. Faraday Discussions, 2012, 158, 125.	1.6	42
21	Location of the Outer Shell and Influence of pH on Carboxylic Acid-Functionalized Poly(propyleneimine) Dendrimers. Macromolecules, 2001, 34, 8380-8383.	2.2	39
22	Formation of Chiral Interdigitated Multilayers at the Air-Liquid Interface Through Acid-Base Interactions. Science, 1996, 274, 2046-2049.	6.0	34
23	Monolayer behaviour of chiral compounds at the air-water interface: 4-hexadecyloxy-butane-1,2-diol. Thin Solid Films, 1996, 284-285, 211-215.	0.8	34
24	Microstructure and rheology of globular protein gels in the presence of gelatin. Food Hydrocolloids, 2016, 55, 34-46.	5.6	34
25	A novel application of neutron scattering on dairy products. Food Hydrocolloids, 2007, 21, 154-158.	5.6	33
26	Long-range ordering in anodic alumina films: a microradian X-ray diffraction study. Journal of Applied Crystallography, 2010, 43, 531-538.	1.9	33
27	Multidimensional Nature of Fluidized Nanoparticle Agglomerates. Langmuir, 2014, 30, 12696-12702.	1.6	32
28	Control of Structure and Growth of Polymorphic Crystalline Thin Films of Amphiphilic Molecules on Liquid Surfaces. Science, 1994, 264, 1566-1570.	6.0	31
29	Structure Determination in the Twilight Region Between Monolayers and 3-D Crystals; a Grazing Incidence X-Ray Diffraction Study of Nanocrystalline Aggregates ofÎ±,Ï‰-Docosanediol at the Airâ€“Water Interface. Angewandte Chemie International Edition in English, 1995, 34, 649-652.	4.4	31
30	Quantitative Neutron Dark-field Imaging through Spin-Echo Interferometry. Scientific Reports, 2015, 5, 16576.	1.6	30
31	Milk Gelation Studied with Small Angle Neutron Scattering Techniques and Monte Carlo Simulations. Journal of Physical Chemistry A, 2010, 114, 2412-2426.	1.1	29
32	SESANS studies of colloid phase transitions, dairy products and polymer fibres. Physica B: Condensed Matter, 2004, 350, 140-146.	1.3	28
33	High-strength bacterial celluloseâ€“polyacrylamide hydrogels: Mesostructure anisotropy as studied by spin-echo small-angle neutron scattering and cryo-SEM. European Polymer Journal, 2017, 88, 269-279.	2.6	28
34	3DXYbehavior of a nematic-smectic-Aphase transition: Confirmation of the de Gennes model. Physical Review Letters, 1992, 68, 800-803.	2.9	27
35	Development of spin-echo small-angle neutron scattering. Journal of Applied Crystallography, 2000, 33, 767-770.	1.9	27
36	A Small-Angle Neutron Scattering Study of Cholic Acid-Based Organogel Systems. Langmuir, 2004, 20, 2075-2080.	1.6	27

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37	Spin control of the lifetime of an intramolecular charge-transfer excited state. Photochemical and Photobiological Sciences, 2003, 2, 995.	1.6	26
38	Real-space neutron scattering methods. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 586, 9-14.	0.7	26
39	Combined SANSâ€“SESANS, from 1nm to 0.1mm in one instrument. Physica B: Condensed Matter, 2011, 406, 2357-2360.	1.3	25
40	Networks of micronized fat crystals grown under static conditions. Food and Function, 2018, 9, 2102-2111.	2.1	25
41	Chiral and herringbone symmetry breaking in water-surface monolayers. Physical Review E, 1996, 53, 667-673.	0.8	24
42	Elastic Neutron Scattering Measurements Using Larmor Precession of Polarized Neutrons. Lecture Notes in Physics, 2002, , 87-99.	0.3	24
43	TOF-SEMSANSâ€”Time-of-flight spin-echo modulated small-angle neutron scattering. Journal of Applied Physics, 2012, 112, .	1.1	24
44	Concept for a time-of-flight Small Angle Neutron Scattering instrument at the European Spallation Source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 762, 22-30.	0.7	23
45	From nanopores to macropores: Fractal morphology of graphite. Carbon, 2016, 96, 541-547.	5.4	23
46	Chirality effects on 2D phase transitions. Thin Solid Films, 1996, 284-285, 56-61.	0.8	22
47	Phase-object approximation in small-angle neutron scattering experiments on silicon gratings. Journal of Applied Crystallography, 2007, 40, 151-157.	1.9	22
48	Model calculations for the spin-echo small-angle neutron-scattering correlation function. Journal of Applied Crystallography, 2003, 36, 109-116.	1.9	21
49	Magnetic topology of Co-based inverse opal-like structures. Physical Review B, 2011, 84, .	1.1	21
50	Additive scaling law for structural organization of chromatin in chicken erythrocyte nuclei. Physical Review E, 2017, 96, 012411.	0.8	21
51	Structural Characterization of Valinomycin and Nonactin at the Airâ^'Solution Interface by Grazing Incidence X-ray Diffraction. Journal of the American Chemical Society, 1997, 119, 11211-11216.	6.6	20
52	On the neutron scattering length density of proteins in H2O/D2O. Physica B: Condensed Matter, 2004, 350, E877-E880.	1.3	20
53	Determination of the real structure of artificial and natural opals on the basis of three-dimensional reconstructions of reciprocal space. JETP Letters, 2009, 90, 272-277.	0.4	20
54	DCD USANS and SESANS: a comparison of two neutron scattering techniques applicable for the study of large-scale structures. Journal of Applied Crystallography, 2013, 46, 354-364.	1.9	20

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55	Influence of neutron irradiation on the microstructure of nuclear graphite: An X-ray diffraction study. Journal of Nuclear Materials, 2017, 487, 323-330.	1.3	20
56	High temperature SANS experiments on Nb(C,N) and MnS precipitates in HSLA steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 1883-1891.	1.1	19
57	Spin-echo methods for SANS and neutron reflectometry. Physica B: Condensed Matter, 2005, 357, 66-72.	1.3	19
58	Separation of enantiomers in a diol monolayer studied by fluorescence microscopy and grazing incidence X-ray diffraction. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1487-1492.	0.4	18
59	Magnetized foils as Ï€ flippers in neutron spin-echo spectrometry. Journal of Applied Physics, 2002, 92, 3354-3362.	1.1	18
60	Spatial modulation of a neutron beam by Larmor precession. Physica B: Condensed Matter, 2009, 404, 2585-2589.	1.3	18
61	Air bubbles in fibrous caseinate gels investigated by neutron refraction, X-ray tomography and refractive microscope. Food Hydrocolloids, 2018, 83, 287-295.	5.6	18
62	Larmor precession applications: magnetised foils as spin flippers in spin-echo SANS with varying wavelength. Physica B: Condensed Matter, 2003, 335, 164-168.	1.3	17
63	Comparison of the performance of SANS and SESANS. Physica B: Condensed Matter, 2004, 350, E787-E790.	1.3	17
64	Spin echo small angle neutron scattering experiment. Physica B: Condensed Matter, 1999, 267-268, 79-83.	1.3	16
65	Spin-echo small-angle neutron scattering to study particle aggregates. Journal of Applied Crystallography, 2003, 36, 816-819.	1.9	16
66	Effect of processing on droplet cluster structure in emulsion gels. Food Hydrocolloids, 2007, 21, 844-854.	5.6	16
67	Impact of water degumming and enzymatic degumming on gum mesostructure formation in crude soybean oil. Food Chemistry, 2020, 311, 126017.	4.2	16
68	Crystalline Monoâ€•and Multilayer Selfâ€Assemblies of Oligothiophenes at the Airâ€“Water Interface. Chemistry - A European Journal, 1997, 3, 930-939.	1.7	15
69	Absolute Orientation of Molecules of Amphiphilic Alcohols in Crystalline Monolayers at the Airâ^'Water Interface. Journal of Physical Chemistry B, 2000, 104, 6843-6850.	1.2	15
70	First quantitative test of spin-echo small-angle neutron scattering. Applied Physics A: Materials Science and Processing, 2002, 74, s115-s117.	1.1	15
71	Ferromagnetic foils as monochromatic Ï€ flippers for application in spin-echo SANS. Physica B: Condensed Matter, 2003, 335, 247-249.	1.3	15
72	Spin-echo small-angle neutron scattering for magnetic samples. Journal of Applied Crystallography, 2006, 39, 252-258.	1.9	15

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73	Using a grating analyser for SEMSANS investigations in the very small angle range. Physica B: Condensed Matter, 2012, 407, 4132-4135.	1.3	15
74	Characterizing Length Scales that Determine the Mechanical Behavior of gels from Crosslinked Casein Micelles. Food Biophysics, 2015, 10, 416-427.	1.4	15
75	Mesoporous Silica Formation Mechanisms Probed Using Combined Spinâ€“Echo Modulated Small-Angle Neutron Scattering (SEMSANS) and Small-Angle Neutron Scattering (SANS). ACS Applied Materials & Interfaces, 2020, 12, 28461-28473.	4.0	15
76	An Insight into the Ice Nucleation Process via Design of Crystalline Ice Nucleators of Variable Size. Journal of Physical Chemistry B, 1997, 101, 8874-8877.	1.2	14
77	Three-dimensional magnetic spin-echo small-angle neutron scattering and neutron depolarization: A comparison. Review of Scientific Instruments, 2006, 77, 073902.	0.6	14
78	Resolution Function for Two-Axis Specular Neutron Reflectivity. Journal of Applied Crystallography, 1996, 29, 152-158.	1.9	13
79	Polarization optimization of spin-echo small angle scattering instruments. Review of Scientific Instruments, 2008, 79, 015113.	0.6	13
80	Small angle neutron scattering quantifies the hierarchical structure in fibrous calcium caseinate. Food Hydrocolloids, 2020, 106, 105912.	5.6	12
81	Two-dimensional crystalline structures and photochemical behavior of cinnamate monolayers on water surfaces. Chirality, 1998, 10, 60-65.	1.3	11
82	Neutron refraction by cylindrical metal wires. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 574, 324-329.	0.7	11
83	Stress, strain, and bulk microstructure in a cohesive powder. Physical Review E, 2008, 77, 051303.	0.8	11
84	Characterization of the Stratified Morphology of Nanoparticle Agglomerates. Journal of Physical Chemistry C, 2016, 120, 20446-20453.	1.5	11
85	Small-angle neutron scattering (SANS) and spin-echo SANS measurements reveal the logarithmic fractal structure of the large-scale chromatin organization in HeLa nuclei. Journal of Applied Crystallography, 2019, 52, 844-853.	1.9	11
86	A versatile shear cell for investigation of structure of food materials under shear. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 566, 21-28.	2.3	11
87	Technical Aspects of Larmor Precession with Inclined Front and End Faces. Lecture Notes in Physics, 2002, , 100-115.	0.3	11
88	SESANS with a monochromatic beam or with time-of-flight applied on colloidal systems. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 529, 16-21.	0.7	10
89	Application of spin-echo small-angle neutron scattering to study the structure of charged colloids. Physica B: Condensed Matter, 2005, 356, 218-222.	1.3	10
90	Structure in cohesive powders studied with spin-echo small angle neutron scattering. Granular Matter, 2008, 10, 407-414.	1.1	10

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91	McStas-model of the delft SESANS. Physica B: Condensed Matter, 2011, 406, 2361-2364.	1.3	10
92	Influence of a hydrophilic spacer on the structure of a phospholipid monolayer. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1545-1550.	0.4	9
93	Elucidation of Multilayer Growth of Amphiphiles on Liquid Surfaces. The Journal of Physical Chemistry, 1996, 100, 8356-8362.	2.9	9
94	Spin-echo small-angle neutron scattering calculations. Physica B: Condensed Matter, 2000, 276-278, 126-127.	1.3	9
95	Structure, anisotropy and fractals in compressed cohesive powders. Powder Technology, 2009, 189, 6-13.	2.1	9
96	Direct comparison of SESANS and SAXS to measure colloidal interactions. Europhysics Letters, 2014, 106, 28002.	0.7	9
97	Spin-echo SANS based on adiabatic HF flippers in dipole magnets with skew poles. Applied Physics A: Materials Science and Processing, 2002, 74, s79-s81.	1.1	8
98	Neutron and ion beams in biological research. Journal of Radioanalytical and Nuclear Chemistry, 2005, 264, 271-275.	0.7	8
99	A Journey along the Extruder with Polystyrene:C₆₀ Nanocomposites: Convergence of Feeding Formulations into a Similar Nanomorphology. Macromolecules, 2017, 50, 3301-3312.	2.2	8
100	Line integral corrections in spin-echo small angle neutron scattering instrument. Physica B: Condensed Matter, 2001, 297, 28-31.	1.3	7
101	Probing the droplet cluster structure in acidified temperatureâ€cycled o/w emulsion gels by means of SESANS^{â€}. International Journal of Food Science and Technology, 2007, 42, 746-752.	1.3	7
102	Development of the Neutron Reflectometer OffSpec at the Delft University of Technology. Neutron News, 2008, 19, 22-25.	0.1	7
103	The extended law of corresponding states when attractions meet repulsions. Soft Matter, 2018, 14, 3704-3715.	1.2	7
104	Spin-echo small-angle neutron scattering for multiscale structure analysis of food materials. Food Structure, 2021, 30, 100235.	2.3	7
105	Laser-induced fluorescence of jet-cooled 7-diethylamino-4-trifluoromethyl coumarin. Chemical Physics Letters, 1988, 145, 71-74.	1.2	6
106	Self-Aggregated Two-Dimensional Crystal Structure of the Mixed Monolayer of Triacontanoic Acid and Nonacosylamine. Evidence in Favor of an Ordered Arrangement of Ionized Head Groups. Langmuir, 1996, 12, 1011-1017.	1.6	6
107	An analysis of magnetic field inhomogeneities in a spin-echo small-angle neutron scattering instrument. Physica B: Condensed Matter, 2000, 276-278, 136-137.	1.3	6
108	Analysis of artificial silicon microstructures by ultra-small-angle and spin-echo small-angle neutron scattering. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 1081-1089.	0.7	6

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109	Influence of substrate microstructure on longitudinal correlation length of porous system of anodic alumina: Small-angle scattering study. Nanotechnologies in Russia, 2013, 8, 631-638.	0.7	6
110	Spin-echo small-angle neutron scattering study of the structure organization of the chromatin in biological cell. Journal of Physics: Conference Series, 2017, 862, 012010.	0.3	6
111	X-ray study of the backbone conformation of a comb-shaped polyacrylate with nematic to smectic A phase transitions. Liquid Crystals, 1994, 16, 853-856.	0.9	5
112	Strukturbestimmung im Grenzbereich zwischen Monoschichten und dreidimensionalen Kristallen; eine Untersuchung nanokristalliner Aggregate von Î±,Ï‰â€Đocosandiol an der GrenzflÃche Wasserâ€Łuft mit RÃ¶ntgenbeugung unter streifendem Einfall. Angewandte Chemie, 1995, 107, 707-711.	1.6	5
113	Magnetic design of a spin-echo small-angle neutron-scattering instrument. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 496, 437-445.	0.7	5
114	Fibre formation in calcium caseinate influenced by solvent isotope effect and drying method â€“ A neutron spectroscopy study. Chemical Engineering Science, 2019, 207, 1270-1277.	1.9	5
115	Systematically quantifying oilâ€“water microemulsion structures using (spin-echo) small angle neutron scattering. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 575, 166-175.	2.3	5
116	Analysis of SESANS data byÂnumericalÂHankel transform implementationÂinÂSasView. Journal of Neutron Research, 2020, 22, 57-70.	0.4	5
117	Structural characterization of spray-dried microgranules by spin-echo small-angle neutron scattering. Powder Technology, 2021, 378, 680-684.	2.1	5
118	The microscopic distribution of hydrophilic polymers in interpenetrating polymer networks (IPNs) of medical grade silicone. Polymer, 2021, 224, 123671.	1.8	5
119	Overview of new Larmor precession techniques. Applied Physics A: Materials Science and Processing, 2002, 74, s323-s325.	1.1	4
120	Magnetised foils as ?-flippers in spin-echo spectrometry. Applied Physics A: Materials Science and Processing, 2002, 74, s94-s96.	1.1	4
121	A magnetised foil as inclined Ï€-flipper for time-of-flight neutron beams. Physica B: Condensed Matter, 2011, 406, 2467-2469.	1.3	4
122	Wavelength-independent constant period spin-echo modulated small angle neutron scattering. Review of Scientific Instruments, 2016, 87, 063907.	0.6	4
123	Feasibility and applications of the spin-echo modulation option for a small angle neutron scattering instrument at the European Spallation Source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 856, 119-132.	0.7	4
124	On the analysis of time-of-flight spin-echo modulated dark-field imaging data. Journal of Physics: Conference Series, 2017, 862, 012026.	0.3	4
125	Head-group variations and monolayer structures of diol derivatives. , 1996, , 351-355.		3
126	Two-axis neutron and x-ray reflectivity: How to avoid alignment pitfalls and how to correct for them. Journal of Neutron Research, 1997, 5, 133-146.	0.4	3

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127	SANS experiments on Nb(C, N) and MnS precipitates in HSLA steel. Applied Physics A: Materials Science and Processing, 2002, 74, s978-s980.	1.1	3
128	Spin-Echo Small Angle Neutron Scattering analysis of liposomes and bacteria. Journal of Physics: Conference Series, 2010, 247, 012016.	0.3	3
129	Study of Inverse Ni-based Photonic Crystal using the Microradian X-ray Diffraction. Journal of Physics: Conference Series, 2010, 247, 012029.	0.3	3
130	Multidimensionality in fluidized nanopowder agglomerates. AIP Conference Proceedings, 2013, , .	0.3	3
131	Evolution of dispersion in the melt compounding of a model polymer nanocomposite system: A multi-scale study. Polymer Testing, 2019, 76, 109-118.	2.3	3
132	Neutron refraction and transmission studied by SESANS. Physica B: Condensed Matter, 2004, 350, E791-E794.	1.3	2
133	Structure of hard-sphere colloid observed in real space by spin-echo small-angle neutron scattering. Physica B: Condensed Matter, 2005, 357, 452-455.	1.3	2
134	Scattering from oriented objects analysed by the anisotropic Guinierâ€“Porod model. Food Structure, 2021, 30, 100221.	2.3	2
135	Line-integral corrections in Larmor-precession devices. Applied Physics A: Materials Science and Processing, 2002, 74, s174-s176.	1.1	1
136	Spin-echo small-angle neutron scattering (SESANS) measurements of needle-like crystallites of gelator compounds. Journal of Physics: Conference Series, 2010, 251, 012035.	0.3	1
137	Investigation of the closed porosity of functional ceramic materials by spin-echo small-angle neutron scattering. Journal of Surface Investigation, 2017, 11, 92-98.	0.1	1
138	Simulations of foil-based spin-echo (modulated) small-angle neutron scattering with a sample using McStas. Journal of Applied Crystallography, 2021, 54, 195-202.	1.9	1
139	Real-Space Neutron Scattering without Collimation: SESANS at the Delft University of Technology. Neutron News, 2008, 19, 19-21.	0.1	0