

Philip S Salmon

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126
papers

4,766
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39
h-index

64
g-index

132
ext. papers

5,115
ext. citations

4.4
avg, IF

5.53
L-index

#	Paper	IF	Citations
126	Neutron and x-ray diffraction studies of liquids and glasses. <i>Reports on Progress in Physics</i> , 2006 , 69, 233-299	14.4	344
125	First solvation shell of the Cu(II) aqua ion: evidence for fivefold coordination. <i>Science</i> , 2001 , 291, 856-9	33.3	314
124	Defects in a disordered world: the structure of glassy GeSe ₂ . <i>Physical Review Letters</i> , 2000 , 84, 2413-6	7.4	211
123	Topological versus chemical ordering in network glasses at intermediate and extended length scales. <i>Nature</i> , 2005 , 435, 75-8	50.4	206
122	Real space manifestation of the first sharp diffraction peak in the structure factor of liquid and glassy materials. <i>Proceedings of the Royal Society A</i> , 1994 , 445, 351-365		188
121	Structure of covalently bonded glass-forming melts: A full partial-structure-factor analysis of liquid GeSe ₂ . <i>Physical Review Letters</i> , 1991 , 67, 97-100	7.4	142
120	The structure of molten and glassy 2:1 binary systems: an approach using the Bhatia-Thornton formalism. <i>Proceedings of the Royal Society A</i> , 1992 , 437, 591-606		98
119	Structure of glassy and liquid GeSe ₂ . <i>Journal of Physics Condensed Matter</i> , 2003 , 15, S1509-S1528	1.8	97
118	Structure of liquids and glasses in the GeBe binary system. <i>Journal of Non-Crystalline Solids</i> , 2007 , 353, 2959-2974	3.9	90
117	High-pressure transformation of SiO ₂ glass from a tetrahedral to an octahedral network: a joint approach using neutron diffraction and molecular dynamics. <i>Physical Review Letters</i> , 2014 , 113, 135501	7.4	85
116	A neutron diffraction study on the structure of liquid germanium. <i>Journal of Physics F: Metal Physics</i> , 1988 , 18, 2345-2352		80
115	The hydration structure around chloride ions in aqueous solution. <i>Faraday Discussions of the Chemical Society</i> , 1988 , 85, 137		77
114	Joint diffraction and modeling approach to the structure of liquid alumina. <i>Physical Review B</i> , 2013 , 87,	3.3	70
113	Glass fragility and atomic ordering on the intermediate and extended range. <i>Physical Review Letters</i> , 2006 , 96, 235502	7.4	70
112	Structure of molten MCl ₃ systems from a polarizable ion simulation model. <i>Journal of Chemical Physics</i> , 1999 , 111, 2028-2037	3.9	69
111	Topological changes in glassy GeSe ₂ at pressures up to 9.3GPa determined by high-energy x-ray and neutron diffraction measurements. <i>Physical Review B</i> , 2006 , 74,	3.3	62
110	Structure of glassy GeO. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 415110	1.8	59

109	Packing and the structural transformations in liquid and amorphous oxides from ambient to extreme conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 10045-8	11.5	58
108	Structure of liquid and glassy ZnCl ₂ . <i>Physical Review B</i> , 2010 , 82,	3.3	58
107	Structure of molten lanthanum and cerium tri-halides by the method of isomorphic substitution in neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 1381-1396	1.8	58
106	The dynamics of water molecules in ionic solution. II. Quasi-elastic neutron scattering and tracer diffusion studies of the proton and ion dynamics in concentrated Ni ²⁺ , Cu ²⁺ and Nd ³⁺ aqueous solutions. <i>Journal of Physics C: Solid State Physics</i> , 1987 , 20, 5727-5747		58
105	The structure of Cu ²⁺ aqueous solutions. <i>Journal of Physics C: Solid State Physics</i> , 1988 , 21, 1335-1349		58
104	Structure of GeO ₂ glass at pressures up to 8.6 GPa. <i>Physical Review B</i> , 2010 , 81,	3.3	55
103	Atomic structure of the two intermediate phase glasses SiSe ₄ and GeSe ₄ . <i>Physical Review B</i> , 2009 , 79,	3.3	55
102	Liquid-liquid phase transition in supercooled yttria-alumina. <i>Physical Review Letters</i> , 2009 , 103, 225702	7.4	54
101	Establishing the structure of GeS ₂ at high pressures and temperatures: a combined approach using x-ray and neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 474217	1.8	53
100	Network topology and the fragility of tetrahedral glass-forming liquids. <i>Physical Review Letters</i> , 2009 , 103, 157801	7.4	52
99	Microvoids in chalcogenide glasses studied by positron annihilation. <i>Journal of Non-Crystalline Solids</i> , 1994 , 170, 57-64	3.9	52
98	Networks under pressure: the development of in situ high-pressure neutron diffraction for glassy and liquid materials. <i>Journal of Physics Condensed Matter</i> , 2015 , 27, 133201	1.8	50
97	Decay of the pair correlations and small-angle scattering for binary liquids and glasses. <i>Journal of Physics Condensed Matter</i> , 2006 , 18, 11443-11469	1.8	50
96	Structure of fast ion conducting and semiconducting glassy chalcogenide alloys. <i>Physical Review Letters</i> , 1994 , 73, 264-267	7.4	50
95	Glass formation and short-range order in chalcogenide materials: The (Ag ₂ S) _x (As ₂ S ₃) _{1-x} (0 . <i>Physical Review Letters</i> , 1990 , 64, 2164-2167	7.4	47
94	Oxygen as a site specific probe of the structure of water and oxide materials. <i>Physical Review Letters</i> , 2011 , 107, 145501	7.4	46
93	Structure of the glassy fast-ion conductor AgPS ₃ by neutron diffraction. <i>Physical Review B</i> , 1998 , 58, 6115-6123	3.3	46
92	Structural transformations on vitrification in the fragile glass-forming system CaAl ₂ O ₄ . <i>Physical Review Letters</i> , 2012 , 109, 235501	7.4	45

91	Isotope effects in water as investigated by neutron diffraction and path integral molecular dynamics. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 284126	1.8	44
90	Density-driven structural transformations in B ₂ O ₃ glass. <i>Physical Review B</i> , 2014 , 90,	3.3	42
89	Density-driven structural transformations in network forming glasses: a high-pressure neutron diffraction study of GeO ₂ glass up to 17.5 GPa. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 415102	1.8	39
88	Structure of eutectic liquids in the Au-Si, Au-Ge, and Ag-Ge binary systems by neutron diffraction. <i>Physical Review B</i> , 2011 , 83,	3.3	39
87	Impact of the exchange-correlation functional on the structure of glassy GeSe ₂ . <i>Solid State Sciences</i> , 2010 , 12, 199-203	3.4	37
86	Identifying and characterising the different structural length scales in liquids and glasses: an experimental approach. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 15286-308	3.6	36
85	Pressure-driven transformation of the ordering in amorphous network-forming materials. <i>Physical Review B</i> , 2016 , 93,	3.3	35
84	The structure of tetrahedral network glass forming systems at intermediate and extended length scales. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 455208	1.8	35
83	The relation between the melt topology and glass-forming ability for liquid Ge-Se alloys. <i>Journal of Physics Condensed Matter</i> , 1994 , 6, 1449-1460	1.8	35
82	Structure and triclustering in Ba-Al-O glass. <i>Physical Review B</i> , 2012 , 85,	3.3	34
81	A determination of the structure of liquid using neutron diffraction and isotopic substitution. <i>Journal of Physics Condensed Matter</i> , 1997 , 9, 6159-6173	1.8	34
80	A neutron diffraction study of glassy GeS ₂ . <i>Journal of Non-Crystalline Solids</i> , 2001 , 293-295, 169-174	3.9	34
79	Structure of molten trivalent metal chlorides studied by using neutron diffraction: the systems TbCl ₃ , YCl ₃ , HoCl ₃ and ErCl ₃ . <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 9293-9302	1.8	33
78	The coordination of Cu(II) in a concentrated copper nitrate solution. <i>Journal of Physics Condensed Matter</i> , 1989 , 1, 5291-5295	1.8	32
77	The dynamics of water molecules in ionic solution. I. The application of quasi-elastic neutron scattering to the study of translational diffusive proton motion. <i>Journal of Physics C: Solid State Physics</i> , 1987 , 20, 1573-1587		32
76	Mechanisms of network collapse in GeO ₂ glass: high-pressure neutron diffraction with isotope substitution as arbitrator of competing models. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 502101	1.8	31
75	Phase separation, crystallization and polyamorphism in the Y ₂ O ₃ -Al ₂ O ₃ system. <i>Journal of Physics Condensed Matter</i> , 2008 , 20, 205103	1.8	29
74	The Jahn-Teller effect in solutions of flexible molecules: a neutron diffraction study on the structure of a Cu ²⁺ solution in ethylene glycol. <i>Molecular Physics</i> , 1995 , 85, 981-998	1.7	29

73	Structure of dysprosium and holmium phosphate glasses by the method of isomorphic substitution in neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, 8235-8252	1.8	28
72	Density-driven defect-mediated network collapse of GeSe ₂ glass. <i>Physical Review B</i> , 2014 , 90,	3.3	27
71	Structure of liquid lithium. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, 195-222	1.8	27
70	Structure of fast-ion conducting chalcogenide glasses: the Ag ₂ As ₂ Se system. <i>Journal of Non-Crystalline Solids</i> , 1993 , 156-158, 720-724	3.9	27
69	Molecular Dynamics Simulations of Disordered Materials. <i>Springer Series in Materials Science</i> , 2015 ,	0.9	26
68	Identification of the relative distribution of rare-earth ions in phosphate glasses. <i>Physical Review Letters</i> , 2003 , 90, 185501	7.4	26
67	Structure of lanthanum and cerium phosphate glasses by the method of isomorphic substitution in neutron diffraction. <i>Physical Review B</i> , 2003 , 68,	3.3	25
66	Moments of the Bhatia-Thornton partial pair-distribution functions. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S3537-S3542	1.8	24
65	Structure of Cu ₂ As ₂ Se glasses investigated by neutron diffraction with copper isotope substitution. <i>Physical Review B</i> , 2008 , 78,	3.3	23
64	Change in the topology of the glass forming liquid GeSe ₂ with increasing temperature. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 10219-10227	1.8	23
63	Pressure-induced structural changes in the network-forming isostatic glass GeSe ₄ : An investigation by neutron diffraction and first-principles molecular dynamics. <i>Physical Review B</i> , 2016 , 93,	3.3	22
62	Dynamics of water protons in concentrated gallium(3+), aluminum(3+), iron(3+) and dysprosium(3+) aqueous solutions: a study using incoherent quasi-elastic neutron scattering. <i>Journal of the American Chemical Society</i> , 1991 , 113, 2930-2939	16.4	22
61	Structural properties of liquid Ge ₂ Se ₃ : A first-principles study. <i>Physical Review B</i> , 2011 , 84,	3.3	21
60	Structure of molten trivalent metal chlorides. <i>Physica B: Condensed Matter</i> , 1997 , 241-243, 967-969	2.8	21
59	The coordination environment of Ag and Cu in ternary chalcogenide glasses. <i>Journal of Non-Crystalline Solids</i> , 1996 , 205-207, 172-175	3.9	21
58	Topological Ordering and Viscosity in the Glass-Forming Ge ₂ Se System: The Search for a Structural or Dynamical Signature of the Intermediate Phase. <i>Frontiers in Materials</i> , 2017 , 4,	4	20
57	Structure of the liquid semiconductor GeSe. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 7051-7060	1.8	20
56	Structure of molten ScCl ₃ and ScI ₃ studied by using neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 2171-2177	1.8	20

55	Structure and properties of densified silica glass: characterizing the order within disorder. <i>NPG Asia Materials</i> , 2020 , 12,	10.3	19
54	Structure of molten trivalent metal bromides studied by using neutron diffraction: the systems DyBr ₃ , YBr ₃ , HoBr ₃ and ErBr ₃ . <i>Journal of Physics Condensed Matter</i> , 2000 , 12, 9539-9550	1.8	18
53	Structure of nickel(2+) solutions in ethylene glycol by neutron diffraction: an observed hydrogen bond between the solvent ligands in the first and second cation coordination shells. <i>Journal of the American Chemical Society</i> , 1991 , 113, 6420-6425	16.4	18
52	Structure of rare-earth phosphate glasses by neutron diffraction. <i>Journal of Non-Crystalline Solids</i> , 2004 , 345-346, 208-212	3.9	16
51	Chalcohalide glasses: The effect of covalent versus ionic bonding in (CuI) _{0.6} (Sb ₂ Se ₃) _{0.4} . <i>Physical Review B</i> , 2002 , 65,	3.3	16
50	Structure of the network glass-former ZnCl ₂ : From the boiling point to the glass. <i>Journal of Non-Crystalline Solids</i> , 2015 , 407, 235-245	3.9	15
49	Structural ordering in Ag-based ternary chalcogenide glasses. <i>Europhysics Letters</i> , 1997 , 39, 521-526	1.6	15
48	The solvation of cations in hydrogen-bonded molecular solvents: a neutron diffraction study on the structure of Ni ²⁺ solutions in ethylene glycol and in glycerol. <i>Molecular Physics</i> , 1995 , 84, 325-343	1.7	15
47	An incoherent quasi-elastic neutron scattering study on the dynamics of aqueous Cr ³⁺ perchlorate solutions. <i>Journal of Physics Condensed Matter</i> , 1989 , 1, 3459-3468	1.8	15
46	The dynamics of aqueous Zn ²⁺ solutions: a study using incoherent quasi-elastic neutron scattering. <i>Journal of Physics Condensed Matter</i> , 1990 , 2, 4297-4309	1.8	15
45	The dynamics of water molecules in ionic solution as studied by incoherent quasi-elastic neutron scattering. <i>Physica B: Condensed Matter</i> , 1989 , 156-157, 129-131	2.8	14
44	Ordering on different length scales in liquid and amorphous materials. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2019 , 2019, 114006	1.9	14
43	Structure and thermal properties of yttrium alumino-phosphate glasses. <i>Journal of Physics Condensed Matter</i> , 2008 , 20, 115204	1.8	13
42	Structure of molten holmium and erbium trichlorides and tribromides. <i>Physica B: Condensed Matter</i> , 2000 , 276-278, 433-434	2.8	13
41	Impact of pressure on the structure of glass and its material properties. <i>MRS Bulletin</i> , 2017 , 42, 734-737	3.2	12
40	Structure of glassy AsTe: the effect of adding a small quantity of Cu or Ag. <i>Journal of Physics Condensed Matter</i> , 2001 , 13, 6165-6176	1.8	12
39	The ion to water-proton binding time in aqueous ionic solution. <i>Physica B: Condensed Matter</i> , 1992 , 182, 421-430	2.8	12
38	The co-ordination environment of Ag in glassy AgAs ₂ . A neutron diffraction study. <i>Journal of Non-Crystalline Solids</i> , 1989 , 114, 82-84	3.9	12

37	Pressure induced structural transformations in amorphous MgSiO ₃ and CaSiO ₃ . <i>Journal of Non-Crystalline Solids: X</i> , 2019 , 3, 100024	2.5	11
36	Barnes et al. Reply. <i>Physical Review Letters</i> , 2011 , 106,	7.4	10
35	A neutron diffraction study on the structure of Cl-solutions in hydrogen-bonded molecular solvents. <i>Journal of Physics Condensed Matter</i> , 1994 , 6, 3839-3848	1.8	10
34	Recent advances in identifying the structure of liquid and glassy oxide and chalcogenide materials under extreme conditions: a joint approach using diffraction and atomistic simulation. <i>Advances in Physics: X</i> , 2016 , 1, 640-660	5.1	9
33	Penfold and Salmon reply. <i>Physical Review Letters</i> , 1992 , 68, 253	7.4	9
32	The bound coherent neutron scattering lengths of the oxygen isotopes. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 505105	1.8	8
31	Structure of molten TbCl ₃ measured by neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 2002 , 14, L703-L707	1.8	8
30	Structure of ionic glasses by neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 1998 , 10, 8139-8146	7.4	8
29	A neutron diffraction study on the structure of molten GeSe ₂ : the Ge coordination environment. <i>Journal of Physics Condensed Matter</i> , 1990 , 2, SA233-SA237	1.8	8
28	Optimizing the counting times for sample-in-container scattering experiments. <i>Journal of Applied Crystallography</i> , 2016 , 49, 2249-2251	3.8	8
27	Densification Mechanisms of Oxide Glasses and Melts 2018 , 343-369		7
26	Structure of praseodymium and neodymium gallate glasses. <i>Journal of Non-Crystalline Solids</i> , 2011 , 357, 2511-2515	3.9	7
25	The structure of Cl-solutions in ethylene glycol studied by neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 1992 , 4, 5249-5262	1.8	7
24	Pressure-dependent structure of the null-scattering alloy Ti _{0.676} Zr _{0.324} . <i>High Pressure Research</i> , 2015 , 35, 239-246	1.6	6
23	La diffraction des neutrons et des rayons X pour l'étude structurale des liquides et des verres. <i>European Physical Journal Special Topics</i> , 2003 , 103, 359-390		6
22	Structure of molten GeSe by neutron diffraction: the Ge coordination environment. <i>Journal of Non-Crystalline Solids</i> , 1999 , 250-252, 405-409	3.9	6
21	The Classification of Isotropic Points in Stress Fields*. <i>Journal of Structural Mechanics</i> , 1983 , 11, 371-381		6
20	Structure of amorphous GeSe ₉ by neutron diffraction and first-principles molecular dynamics: Impact of trajectory sampling and size effects. <i>Journal of Chemical Physics</i> , 2016 , 145, 084502	3.9	6

19	Structure of semiconducting versus fast-ion conducting glasses in the Ag-Ge-Se system. <i>Royal Society Open Science</i> , 2018 , 5, 171401	3.3	5
18	The structure of molten CuCl, CuI and their mixtures as investigated by using neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 075104	1.8	5
17	Zeidler et al. Reply.. <i>Physical Review Letters</i> , 2012 , 108,	7.4	5
16	Structure of the Intermediate Phase Glasses GeSe ₃ and GeSe ₄ : The Deployment of Neutron Diffraction With Isotope Substitution. <i>Frontiers in Materials</i> , 2019 , 6,	4	4
15	Structure of Glassy Ag ₂ TeSe by Neutron Diffraction with Isotope Substitution. <i>Zeitschrift Fur Physikalische Chemie</i> , 2016 , 230, 417-432	3.1	4
14	Structure of rare-earth chalcogenide glasses by neutron and x-ray diffraction. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 225703	1.8	3
13	Structure in liquid KTe investigated by means of neutron diffraction using ²⁰⁵ Tl isotope substitution. <i>Physica B: Condensed Matter</i> , 1997 , 241-243, 961-963	2.8	3
12	Partial vibrational density of states for amorphous solids from inelastic neutron scattering. <i>Physical Review B</i> , 2018 , 98,	3.3	2
11	Structure of As-Se glasses by neutron diffraction with isotope substitution. <i>Journal of Chemical Physics</i> , 2020 , 153, 154507	3.9	2
10	Structure of crystalline and amorphous materials in the NASICON system NaAlGe(PO). <i>Journal of Chemical Physics</i> , 2021 , 155, 074501	3.9	2
9	High-pressure neutron diffraction apparatus for investigating the structure of liquids under hydrothermal conditions. <i>High Pressure Research</i> , 2017 , 37, 529-544	1.6	1
8	La structure des systèmes d'ordonné et sa mesure par diffraction. <i>European Physical Journal Special Topics</i> , 2003 , 111, 59-95		1
7	Structural model for amorphous aluminosilicates.. <i>Journal of Chemical Physics</i> , 2022 , 156, 064503	3.9	1
6	Structure and dynamics of aqueous NaCl solutions at high temperatures and pressures. <i>Journal of Chemical Physics</i> , 2021 , 155, 194506	3.9	1
5	The Atomic-Scale Structure of Network Glass-Forming Materials. <i>Springer Series in Materials Science</i> , 2015 , 1-31	0.9	1
4	Neutron diffraction as a probe of liquid and glass structures under extreme conditions. <i>Neutron News</i> , 2016 , 27, 22-26	0.4	1
3	Persistent homology in two-dimensional atomic networks. <i>Journal of Chemical Physics</i> , 2021 , 154, 124109	3.9	1
2	Many-body effects at the origin of structural transitions in BO. <i>Journal of Chemical Physics</i> , 2019 , 151, 224508	3.9	0

- 1 Atomic Scale Modelling of Materials: A Prerequisite for any Multi-Scale Approach to Structural and Dynamical Properties. *Solid State Phenomena*, **2008**, 139, 141-150 0.4