

David A Keen

List of Publications by Year in descending order

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90
papers

7,472
citations

57758

44
h-index

53230

85
g-index

93
all docs

93
docs citations

93
times ranked

7268
citing authors

#	ARTICLE	IF	CITATIONS
1	Colossal Positive and Negative Thermal Expansion in the Framework Material Ag ₃ [Co(CN) ₆]. <i>Science</i> , 2008, 319, 794-797.	12.6	575
2	A comparison of various commonly used correlation functions for describing total scattering. <i>Journal of Applied Crystallography</i> , 2001, 34, 172-177.	4.5	541
3	RMCPProfile: reverse Monte Carlo for polycrystalline materials. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 335218.	1.8	351
4	Liquid metal-organic frameworks. <i>Nature Materials</i> , 2017, 16, 1149-1154.	27.5	326
5	Structural modelling of glasses using reverse Monte Carlo simulation. <i>Nature</i> , 1990, 344, 423-425.	27.8	294
6	The crystallography of correlated disorder. <i>Nature</i> , 2015, 521, 303-309.	27.8	262
7	Melt-Quenched Glasses of Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2016, 138, 3484-3492.	13.7	252
8	Structure and Properties of an Amorphous Metal-Organic Framework. <i>Physical Review Letters</i> , 2010, 104, 115503.	7.8	246
9	The missing boundary in the phase diagram of PbZr _{1-x} Ti _x O ₃ . <i>Nature Communications</i> , 2014, 5, 5231.	12.8	234
10	Reversible pressure-induced amorphization of a zeolitic imidazolate framework (ZIF-4). <i>Chemical Communications</i> , 2011, 47, 7983.	4.1	192
11	Facile Mechanochemistry of Amorphous Zeolitic Imidazolate Frameworks. <i>Journal of the American Chemical Society</i> , 2011, 133, 14546-14549.	13.7	184
12	Gel-based morphological design of zirconium metal-organic frameworks. <i>Chemical Science</i> , 2017, 8, 3939-3948.	7.4	177
13	Ball-milling-induced Amorphization of Zeolitic Imidazolate Frameworks (ZIFs) for the Irreversible Trapping of Iodine. <i>Chemistry - A European Journal</i> , 2013, 19, 7049-7055.	3.3	171
14	Negative Thermal Expansion in ZrW ₂ O ₈ : Mechanisms, Rigid Unit Modes, and Neutron Total Scattering. <i>Physical Review Letters</i> , 2005, 95, 255501.	7.8	164
15	Bifurcated Polarization Rotation in Bismuth-based Piezoelectrics. <i>Advanced Functional Materials</i> , 2013, 23, 185-190.	14.9	150
16	Metal-organic framework glasses with permanent accessible porosity. <i>Nature Communications</i> , 2018, 9, 5042.	12.8	147
17	Thermal Amorphization of Zeolitic Imidazolate Frameworks. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 3067-3071.	13.8	146
18	Amorphization of the prototypical zeolitic imidazolate framework ZIF-8 by ball-milling. <i>Chemical Communications</i> , 2012, 48, 7805.	4.1	137

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19	A detailed structural characterization of quartz on heating through the $\hat{\Gamma}$ - $\hat{\Gamma}'$ phase transition. Mineralogical Magazine, 2001, 65, 489-507.	1.4	132
20	Emergence of Long-Range Order in $\langle \text{BaTiO}_3 \rangle$ Local Symmetry-Breaking Distortions. Physical Review Letters, 2016, 116, 207602.	1.8	112
21	Disordering phenomena in superionic conductors. Journal of Physics Condensed Matter, 2002, 14, R819-R857.	1.8	112
22	Neutron total scattering method: simultaneous determination of long-range and short-range order in disordered materials. European Journal of Mineralogy, 2002, 14, 331-348.	1.3	109
23	Direct measurement of the Si-O bond length and orientational disorder in the high-temperature phase of cristobalite. Physics and Chemistry of Minerals, 1997, 24, 311-317.	0.8	99
24	Metal-organic framework crystal-glass composites. Nature Communications, 2019, 10, 2580.	12.8	97
25	Application of the reverse Monte Carlo method to crystalline materials. Journal of Applied Crystallography, 2001, 34, 630-638.	4.5	94
26	Connecting defects and amorphization in UiO-66 and MIL-140 metal-organic frameworks: a combined experimental and computational study. Physical Chemistry Chemical Physics, 2016, 18, 2192-2201.	2.8	85
27	Halogenated Metal-Organic Framework Glasses and Liquids. Journal of the American Chemical Society, 2020, 142, 3880-3890.	13.7	83
28	Local structures of amorphous and crystalline phases of silica, SiO ₂ , by neutron total scattering. Journal of Physics Condensed Matter, 1999, 11, 9263-9273.	1.8	78
29	Magnetic Structure of MnO at 10 ÅK from Total Neutron Scattering Data. Physical Review Letters, 2006, 96, 047209.	7.8	74
30	Ionic liquid facilitated melting of the metal-organic framework ZIF-8. Nature Communications, 2021, 12, 5703.	12.8	74
31	Dynamic structural disorder in cristobalite: neutron total scattering measurement and reverse Monte Carlo modelling. Journal of Physics Condensed Matter, 2001, 13, 403-423.	1.8	71
32	Liquid phase blending of metal-organic frameworks. Nature Communications, 2018, 9, 2135.	12.8	69
33	Flux melting of metal-organic frameworks. Chemical Science, 2019, 10, 3592-3601.	7.4	67
34	Structural Description of Pressure-Induced Amorphization in ZrW ₂ O ₈ . Physical Review Letters, 2007, 98, 225501.	7.8	65
35	Synthesis and Properties of a Compositional Series of MIL-53(Al) Metal-Organic Framework Crystal-Glass Composites. Journal of the American Chemical Society, 2019, 141, 15641-15648.	13.7	65
36	Melting of hybrid organic-inorganic perovskites. Nature Chemistry, 2021, 13, 778-785.	13.6	65

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37	Structural changes in silver bromide at the melting point. <i>Journal of Physics Condensed Matter</i> , 1992, 4, 6703-6714.	1.8	59
38	Refinement of the Si-O-Si bond angle distribution in vitreous silica. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S67-S75.	1.8	56
39	Direct visualization of critical hydrogen atoms in a pyridoxal 5 α -phosphate enzyme. <i>Nature Communications</i> , 2017, 8, 955.	12.8	55
40	Structural disorder and loss of piezoelectric properties in α -quartz at high temperature. <i>Applied Physics Letters</i> , 2002, 81, 2968-2970.	3.3	54
41	A quantum liquid of magnetic octupoles on the pyrochlore lattice. <i>Nature Physics</i> , 2020, 16, 546-552.	16.7	54
42	Reverse Monte Carlo modelling of crystalline disorder. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S15-S22.	1.8	52
43	Simultaneous analysis of changes in long-range and short-range structural order at the displacive phase transition in quartz. <i>Journal of Physics Condensed Matter</i> , 2000, 12, L723-L730.	1.8	51
44	Refining disordered structural models using reverse monte carlo methods: Application to vitreous silica. <i>Phase Transitions</i> , 1997, 61, 109-124.	1.3	46
45	Local structure of the metal-organic perovskite dimethylammonium manganese formate. <i>Dalton Transactions</i> , 2016, 45, 4380-4391.	3.3	44
46	Mixed hierarchical local structure in a disordered metal-organic framework. <i>Nature Communications</i> , 2021, 12, 2062.	12.8	44
47	Long-Range Electrostatics-Induced Two-Proton Transfer Captured by Neutron Crystallography in an Enzyme Catalytic Site. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 4924-4927.	13.8	42
48	Structural disorder in AgBr on the approach to melting. <i>Journal of Physics Condensed Matter</i> , 1990, 2, 2773-2786.	1.8	39
49	Total scattering and the pair distribution function in crystallography. <i>Crystallography Reviews</i> , 2020, 26, 143-201.	1.5	39
50	Total scattering and reverse Monte Carlo study of the 105 K displacive phase transition in strontium titanate. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S111-S124.	1.8	38
51	Investigating the melting behaviour of polymorphic zeolitic imidazolate frameworks. <i>CrystEngComm</i> , 2020, 22, 3627-3637.	2.6	37
52	Metal-organic framework and inorganic glass composites. <i>Nature Communications</i> , 2020, 11, 5800.	12.8	35
53	Determination of disordered magnetic structures by RMC modelling of neutron diffraction data. <i>Journal of Physics Condensed Matter</i> , 1991, 3, 7383-7394.	1.8	34
54	Local structure in Ag ₃ [Co(CN) ₆]: colossal thermal expansion, rigid unit modes and argentophilic interactions. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 255225.	1.8	34

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55	A comparison of the amorphization of zeolitic imidazolate frameworks (ZIFs) and aluminosilicate zeolites by ball-milling. Dalton Transactions, 2016, 45, 4258-4268.	3.3	34
56	Orbital Dimer Model for the Spin-Glass State in Y_2O_7 . Physical Review Letters, 2017, 118, 067201.	7.8	34
57	Post-Synthetic Modification of a Metal-Organic Framework Glass. Chemistry of Materials, 2022, 34, 2187-2196.	6.7	27
58	Local structure in ZrW_2O_8 from neutron total scattering. Journal of Physics Condensed Matter, 2007, 19, 335215.	1.8	26
59	Room Temperature Neutron Crystallography of Drug Resistant HIV-1 Protease Uncovers Limitations of X-ray Structural Analysis at 100 K. Journal of Medicinal Chemistry, 2017, 60, 2018-2025.	6.4	25
60	Thermodynamic features and enthalpy relaxation in a metal-organic framework glass. Physical Chemistry Chemical Physics, 2018, 20, 18291-18296.	2.8	24
61	Local-scale structures across the morphotropic phase boundary in $PbZr_{1-x}Ti_xO_3$. IUCr, 2018, 5, 73-81.	2.2	24
62	Stepwise collapse of a giant pore metal-organic framework. Dalton Transactions, 2021, 50, 5011-5022.	3.3	23
63	Determination of structural disorder in superionic by neutron total scattering. Journal of Physics Condensed Matter, 1998, 10, 8217-8234.	1.8	22
64	Local structure study of the orbital order/disorder transition in $LaMnO_3$. Physical Review B, 2017, 95, .	3.2	22
65	Structural investigations of amorphous metal-organic frameworks formed via different routes. Physical Chemistry Chemical Physics, 2018, 20, 7857-7861.	2.8	22
66	Structural evolution in a melt-quenched zeolitic imidazolate framework glass during heat-treatment. Chemical Communications, 2019, 55, 2521-2524.	4.1	21
67	A new route to porous metal-organic framework crystal-glass composites. Chemical Science, 2020, 11, 9910-9918.	7.4	21
68	Quantitative understanding of negative thermal expansion in scandium trifluoride from neutron total scattering measurements. Physical Review B, 2020, 102, .	3.2	20
69	MCGRtof: Monte Carlo G(r) with resolution corrections for time-of-flight neutron diffractometers. Journal of Applied Crystallography, 2001, 34, 780-782.	4.5	19
70	Tuning the Morphological Appearance of Iron(III) Fumarate: Impact on Material Characteristics and Biocompatibility. Chemistry of Materials, 2020, 32, 2253-2263.	6.7	19
71	Orbital Dimer Model for the Spin-Glass State in Y_2O_7 . Physical Review Letters, 2017, 118, 067201.	3.2	17
72	Magnetic structure of paramagnetic MnO. Physical Review B, 2018, 97, .	3.2	16

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73	The hydrogen-bonding transition and isotope-dependent negative thermal expansion in HCo(CN)_6 . <i>Journal of Physics Condensed Matter</i> , 2010, 22, 404202.	1.8	15
74	Glassy behaviour of mechanically amorphised ZIF-62 isomorphs. <i>Chemical Communications</i> , 2021, 57, 9272-9275.	4.1	15
75	Dimensional crossover of correlated anion disorder in oxynitride perovskites. <i>Chemical Communications</i> , 2018, 54, 5245-5247.	4.1	12
76	Spin configurations in an amorphous random-anisotropy magnet. <i>Physical Review B</i> , 1996, 54, 1036-1042.	3.2	11
77	Stochastic Polarization Instability in PbTiO_3 . <i>Physical Review Letters</i> , 2018, 121, 137602.	7.8	11
78	Multivariate analysis of disorder in metal-organic frameworks. <i>Nature Communications</i> , 2022, 13, 2173.	12.8	10
79	Principles of melting in hybrid organic-inorganic perovskite and polymorphic ABX_3 structures. <i>Chemical Science</i> , 2022, 13, 2033-2042.	7.4	9
80	Neutron scattering study of the orientational disorder in potassium cyanide. <i>Journal of Physics Communications</i> , 2020, 4, 023001.	1.2	8
81	Spin-ice physics in cadmium cyanide. <i>Nature Communications</i> , 2021, 12, 2272.	12.8	7
82	Materials Formed by Combining Inorganic Glasses and Metal-Organic Frameworks. <i>Chemistry - A European Journal</i> , 2022, 28, .	3.3	7
83	Room temperature crystallography of human acetylcholinesterase bound to a substrate analogue 4K-TMA: Towards a neutron structure. <i>Current Research in Structural Biology</i> , 2021, 3, 206-215.	2.2	6
84	Soft-mode anisotropy in the negative thermal expansion material ReO_3 . <i>Physical Review B</i> , 2021, 104, .	3.2	6
85	Neutron and X-ray total scattering study of hydrogen disorder in fully hydrated hydrogrossular, $\text{Ca}_3\text{Al}_2(\text{OH}_4)_3$. <i>Physics and Chemistry of Minerals</i> , 2018, 45, 333-342.	0.8	5
86	Structural study of bismuth ferrite BiFeO_3 by neutron total scattering and the reverse Monte Carlo method. <i>Physical Review B</i> , 2019, 100, .	1.2	5
87	Advantages of a curved image plate for rapid laboratory-based x-ray total scattering measurements: Application to pair distribution function analysis. <i>Review of Scientific Instruments</i> , 2021, 92, 043107.	1.3	4
88	Orientational order and phase transitions in deuterated methane: a neutron total scattering and reverse Monte Carlo study. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 015401.	1.8	4
89	Orientational disorder in sulfur hexafluoride: a neutron total scattering and reverse Monte Carlo study. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 295401.	1.8	2
90	Unusual Breathing Behavior of Optically Excited Barium Titanate Nanocrystals. <i>Crystals</i> , 2020, 10, 365.	2.2	1