

Michael Marek Koza

List of Publications by Year in descending order

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165
papers

4,561
citations

76326

40
h-index

133252

59
g-index

168
all docs

168
docs citations

168
times ranked

5140
citing authors

#	ARTICLE	IF	CITATIONS
1	Breakdown of phonon glass paradigm in La- and Ce-filled Fe ₄ Sb ₁₂ skutterudites. Nature Materials, 2008, 7, 805-810.	27.5	299
2	Influence of chemical short-range order on atomic diffusion in Al-Ni melts. Applied Physics Letters, 2005, 86, 011918.	3.3	108
3	Experimental Evidence Supported by Simulations of a Very High H^2 Diffusion in Metal Organic Framework Materials. Physical Review Letters, 2008, 100, 245901.	7.8	99
4	Strong Renormalization of Phonon Frequencies in Mg _{1-x} Al _x B ₂ . Physical Review Letters, 2002, 88, 067001.	7.8	96
5	From crystal to glass-like thermal conductivity in crystalline minerals. Physical Chemistry Chemical Physics, 2015, 17, 19751-19758.	2.8	96
6	Formation of ice XII at different conditions. Nature, 1999, 397, 660-661.	27.8	92
7	Adsorption and Diffusion of Light Hydrocarbons in UiO-66(Zr): A Combination of Experimental and Modeling Tools. Journal of Physical Chemistry C, 2014, 118, 27470-27482.	3.1	84
8	Kinetics of the high- to low-density amorphous water transition. Journal of Physics Condensed Matter, 2003, 15, 321-332.	1.8	82
9	Atomic diffusion in liquid Ni, NiP, PdNiP, and PdNiCuP alloys. Applied Physics Letters, 2004, 85, 4881-4883.	3.3	82
10	Crystal-like High Frequency Phonons in the Amorphous Phases of Solid Water. Physical Review Letters, 2000, 85, 4100-4103.	7.8	74
11	Crystal-field and Kondo-scale investigations of $\ln M^2$	3.2	74
12	Nanofibrillar Structure and Molecular Mobility in Spider Dragline Silk. Macromolecules, 2005, 38, 8447-8453.	4.8	73
13	Spin-glass order induced by dynamic frustration. Nature Physics, 2008, 4, 766-770.	16.7	73
14	Vibronic and Magnetic Excitations in the Spin-Orbital Liquid State of FeSc ₂ S ₄ . Physical Review Letters, 2005, 94, 237402.	7.8	72
15	Evidence for two distinct spin relaxation mechanisms in \hat{A} spin ice Ho ₂ Ti ₂ O ₇ . Journal of Physics Condensed Matter, 2004, 16, S635-S642.	1.8	71
16	Formation and annealing of cubic ice: I. Modelling of stacking faults. Journal of Physics Condensed Matter, 2008, 20, 285104.	1.8	71
17	Charge density wave quantum critical point with strong enhancement of superconductivity. Nature Physics, 2017, 13, 967-972.	16.7	70
18	Liquid 1-propanol studied by neutron scattering, near-infrared, and dielectric spectroscopy. Journal of Chemical Physics, 2014, 140, 124501.	3.0	68

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19	Nature of Amorphous Polymorphism of Water. Physical Review Letters, 2005, 94, 125506.	7.8	66
20	Translational and Rotational Diffusion in Water in the Gigapascal Range. Physical Review Letters, 2013, 111, 185901.	7.8	66
21	Ice XII in Its Second Regime of Metastability. Physical Review Letters, 2000, 84, 4112-4115.	7.8	62
22	Fast diffusion in ZrTiCuNiBe melts. Applied Physics Letters, 2003, 83, 3894-3896.	3.3	61
23	Aerodynamic levitation and laser heating:. European Physical Journal: Special Topics, 2011, 196, 151-165.	2.6	58
24	Formation and annealing of cubic ice: II. Kinetic study. Journal of Physics Condensed Matter, 2008, 20, 285105.	1.8	53
25	Generalized density of states and anharmonicity of the low-energy phonon bands from coherent inelastic neutron scattering response in the pyrochlore osmates $A \times \text{Os}$ Physical Review B, 2013, 88, .	3.2	53
26	Diffusion of Binary CO ₂ /CH ₄ Mixtures in the MIL-47(V) and MIL-53(Cr) Metal-Organic Framework Type Solids: A Combination of Neutron Scattering Measurements and Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2013, 117, 11275-11284.	3.1	51
27	Ternary clathrates BaZnGe: phase equilibria, crystal chemistry and physical properties. Journal of Physics Condensed Matter, 2007, 19, 216223.	1.8	50
28	Neutron scattering and muon spin relaxation measurements of the noncentrosymmetric antiferromagnet CeCoGe Physical Review B, 2013, 88, .	3.2	49
29	Nanocrystalline silicon: lattice dynamics and enhanced thermoelectric properties. Physical Chemistry Chemical Physics, 2014, 16, 25701-25709.	2.8	49
30	Anharmonicity and guest-host coupling in clathrate hydrates. Physical Chemistry Chemical Physics, 2002, 4, 4809-4816.	2.8	48
31	Magnetic ordering and spin excitations in the frustrated magnet MnSc ₂ S ₄ . Physical Review B, 2006, 73, .	3.2	47
32	Clathrate formation in the Ba-Pd-Ge system: Phase equilibria, crystal structure, and physical properties. Physical Review B, 2007, 76, .	3.2	47
33	Structure-Property Relationships in the Crystals of the Smallest Amino Acid: An Incoherent Inelastic Neutron Scattering Study of the Glycine Polymorphs. Journal of Physical Chemistry B, 2008, 112, 8748-8759.	2.6	47
34	Dynamic Singularity in Multicomponent Glass-Forming Metallic Liquids. Physical Review Letters, 2008, 101, 037801.	7.8	45
35	Silkworm Silk under Tensile Strain Investigated by Synchrotron X-ray Diffraction and Neutron Spectroscopy. Macromolecules, 2007, 40, 1035-1042.	4.8	44
36	Phonon density of states, anharmonicity, electron-phonon coupling, and possible multigap superconductivity in the clathrate superconductors Ba Physical Review B, 2008, 77, .	3.2	44

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37	Vibrational dynamics of filled skutterudites<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"		
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55	Absence of molecular mobility on nano-second time scales in amorphous ice phases. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 1423.	2.8	29
56	Observation of subtle dynamic transitions by a combination of neutron scattering, X-ray diffraction and DSC: A case study of the monoclinic l-cysteine. <i>Biophysical Chemistry</i> , 2010, 148, 34-41.	2.8	29
57	Magnetoelastic hybrid excitations in CeAuAl ₃ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 6695-6700.	7.1	29
58	On the heterogeneous character of water's amorphous polymorphism. <i>Journal of Applied Crystallography</i> , 2007, 40, s517-s521.	4.5	27
59	Influence of Doping on Structural and Thermoelectric Properties of AgSbSe ₂ . <i>Journal of Electronic Materials</i> , 2010, 39, 2053-2058.	2.2	27
60	Determination of Conformational Entropy of Fully and Partially Folded Conformations of Holo- and Apomyoglobin. <i>Journal of Physical Chemistry B</i> , 2015, 119, 72-82.	2.6	25
61	Fast methane diffusion at the interface of two clathrate structures. <i>Nature Communications</i> , 2017, 8, 1076.	12.8	25
62	Spin dynamics of the frustrated easy-axis triangular antiferromagnet 2HAgNiO_2 by inelastic neutron scattering. <i>Physical Review B</i> , 2009, 79, .	3.2	24
63	Vibrational dynamics of the type-I clathrate $8\text{Ba}_2\text{Ag}_2\text{NiO}_8$. <i>Physical Review B</i> , 2010, 82, .	3.2	24
64	Localized Proton Motions in Acceptor-Doped Barium Zirconates. <i>Journal of Physical Chemistry C</i> , 2017, 121, 7088-7093.	3.1	24
65	Effects of impurities on the lattice dynamics of nanocrystalline silicon for thermoelectric application. <i>Journal of Materials Science</i> , 2013, 48, 2836-2845.	3.7	23
66	Effect of the electropositive elements A = Sc, La, and Ce on the microscopic dynamics of $\text{AV}_2\text{Al}_{20}$. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 27119-27133.	2.8	23
67	Role of the doping level in localized proton motions in acceptor-doped barium zirconate proton conductors. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 13697-13704.	2.8	23
68	Inelastic neutron scattering and frequency-domain magnetic resonance studies of S=4 and S=12 Mn ₆ single-molecule magnets. <i>Physical Review B</i> , 2010, 81, .	3.2	21
69	In-beam test of the Boron-10 Multi-Grid neutron detector at the IN6 time-of-flight spectrometer at the ILL. <i>Journal of Physics: Conference Series</i> , 2014, 528, 012040.	0.4	21
70	Dynamical Crossover in Hot Dense Water: The Hydrogen Bond Role. <i>Journal of Physical Chemistry B</i> , 2016, 120, 9051-9059.	2.6	20
71	Direct comparison of elastic incoherent neutron scattering experiments with molecular dynamics simulations of DMPC phase transitions. <i>European Physical Journal E</i> , 2016, 39, 48.	1.6	20
72	Editorial. <i>European Physical Journal E</i> , 2003, 12, 3-4.	1.6	19

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73	Experimental determination of the phonon density of states in filled skutterudites: evidence for a localized mode of the filling atom. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 1617.	2.8	19
74	Increased molecular mobility in humid silk fibers under tensile stress. <i>Physical Review E</i> , 2011, 83, 016104.	2.1	19
75	Muon spin rotation and neutron scattering study of the noncentrosymmetric tetragonal compound CeAuAl_3 . <i>Physical Review B</i> , 2015, 91, .	3.2	19
76	Proton jump diffusion dynamics in hydrated barium zirconates studied by high-resolution neutron backscattering spectroscopy. <i>Journal of Materials Chemistry A</i> , 2018, 6, 7538-7546.	10.3	19
77	Vibrational dynamics of amorphous ice structures studied by high-resolution neutron spectroscopy. <i>Physical Review B</i> , 2008, 78, .	3.2	18
78	Dynamics of apomyoglobin in the $\hat{1}\pm$ -to- $\hat{1}^2$ transition and of partially unfolded aggregated protein. <i>European Biophysics Journal</i> , 2009, 38, 237-244.	2.2	18
79	Correlation of the dynamics of native human acetylcholinesterase and its inhibited huperzine A counterpart from sub-picoseconds to nanoseconds. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140372.	3.4	18
80	Magnetic structures and excitations in CePd_2 series: Development of the vibron states. <i>Physical Review B</i> , 2017, 95, .	3.2	18
81	Vibrational dynamics and phonon dispersion of polycrystalline ice XII and of high-density amorphous ice. <i>Physical Review B</i> , 2008, 77, .	3.2	17
82	Picosecond dynamics in haemoglobin from different species: A quasielastic neutron scattering study. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2014, 1840, 2989-2999.	2.4	17
83	Insight into Design of Improved Oxide Ion Conductors: Dynamics and Conduction Mechanisms in the $\text{Bi}_{0.913}\text{V}_{0.087}\text{O}_{1.587}$ Solid Electrolyte. <i>Journal of the American Chemical Society</i> , 2019, 141, 9989-9997.	13.7	17
84	Dynamics of the Peripheral Membrane Protein P2 from Human Myelin Measured by Neutron Scattering – A Comparison between Wild-Type Protein and a Hinge Mutant. <i>PLoS ONE</i> , 2015, 10, e0128954.	2.5	17
85	Vibrational Dynamics of Filled Skutterudites $\text{La}_4\text{X}_{12}(\text{T})\text{Te}_4$ ($\text{T} = \text{Fe}, \text{Co}, \text{Ni}$). <i>Physical Review B</i> , 2016, 93, 080401.	1.6	16
86	Proton Dynamics in Hydrated $\text{BaZr}_{0.9}\text{M}_{0.1}\text{O}_{2.95}$ ($\text{M} = \text{Fe}, \text{Co}, \text{Ni}$). <i>Physical Review B</i> , 2016, 93, 080401.	3.1	16
87	Lattice Dynamics Study of Thermoelectric Oxychalcogenide BiCuChO ($\text{Ch} = \text{Se}, \text{S}$). <i>Journal of Physical Chemistry C</i> , 2019, 123, 16046-16057.	3.1	16
88	Inelastic neutron scattering experiments on antimony-based filled skutterudites. <i>Physica B: Condensed Matter</i> , 2004, 350, E403-E405.	2.7	15
89	Application of Incoherent Inelastic Neutron Scattering in Pharmaceutical Analysis: Relaxation Dynamics in Phenacetin. <i>Molecular Pharmaceutics</i> , 2012, 9, 2434-2441.	4.6	15
90	Lattice dynamics in intermetallic Mg_2Ge and Mg_2Si . <i>Journal of Physics Condensed Matter</i> , 2014, 26, 485401.	1.8	15

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91	Optimal Spin Ice States with a Fast Monopole Hopping Rate in \mathbb{Z}^d		

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109	Diffusion of Carbon Dioxide and Nitrogen in the Small-Pore Titanium Bis(phosphonate) Metal-Organic Framework MIL-91 (Ti): A Combination of Quasielastic Neutron Scattering Measurements and Molecular Dynamics Simulations. <i>Physical Review B</i> , 2021, 103, 024407.	2.1	11
110	Anisotropic Low-energy Vibrational Modes as an Effect of Cage Geometry in the Binary Barium Silicon Clathrate. <i>Physical Review B</i> , 2021, 103, 024407.	3.2	11
111	Water Mobility in the Interfacial Liquid Layer of Ice/Clay Nanocomposites. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 7697-7702.	13.8	11
112	Diffusion in dense supercritical methane from quasi-elastic neutron scattering measurements. <i>Nature Communications</i> , 2021, 12, 1958.	12.8	11
113	Crystalline electric field effects in Inelastic neutron scattering. <i>Physical Review B</i> , 2008, 78, .	3.2	10
114	Simple view of the spectrum: Sn resonances and mean field. <i>Physical Review B</i> , 2015, 91, .	3.2	10
115	Origin of the highly anisotropic thermal expansion of the semiconducting ZnSb and relations with its thermoelectric applications. <i>RSC Advances</i> , 2015, 5, 87118-87131.	3.6	10
116	Nickel self-diffusion in a liquid and undercooled NiSi alloy. <i>Physical Review B</i> , 2016, 94, .	3.2	10
117	Contrasting effect of La substitution on the magnetic moment direction in the Kondo semiconductors CeTAl ₁₀ (T=Ru,Os). <i>Physical Review B</i> , 2015, 92, .	3.2	9
118	Magnetic dynamics of the spin-glass system PrAu ₂ Si ₂ : An inelastic neutron scattering study. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 310, 1535-1536.	2.3	8
119	Lattice dynamics and thermoelectric properties of nanocrystalline silicon-germanium alloys. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 515-523.	1.8	8
120	Polymorphic drugs examined with neutron spectroscopy: Is making more stable forms really that simple?. <i>Chemical Physics</i> , 2013, 427, 124-128.	1.9	7
121	Temperature-dependent dynamic structure factors for liquid water inferred from inelastic neutron scattering measurements. <i>Journal of Chemical Physics</i> , 2021, 155, 024502.	3.0	7
122	Ultra-fast diffusion of hydrogen in a novel mesoporous N-doped carbon. <i>Carbon</i> , 2020, 166, 307-315.	10.3	7
123	Coexistence of ferromagnetic and antiferromagnetic spin correlations in La _{1.2} Sr _{1.8} Mn ₂ O ₇ . <i>Physical Review B</i> , 2006, 73, .	3.2	6
124	Multi-step magnetic ordering in frustrated thiospinel MnSc ₂ S ₄ . <i>Journal of Physics Condensed Matter</i> , 2007, 19, 145262.	1.8	6
125	Characteristic energy scales in CePdAl. <i>Physica Status Solidi (B): Basic Research</i> , 2013, 250, 468-471.	1.5	6
126	The Boson Peak of Amyloid Fibrils: Probing the Softness of Protein Aggregates by Inelastic Neutron Scattering. <i>Journal of Physical Chemistry B</i> , 2014, 118, 2913-2923.	2.6	6

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163	Advanced functionalized materials. Neutron News, 2012, 23, 15-19.	0.2	0
164	Neutron diffraction study of polycrystalline 4He in a porous medium. JETP Letters, 2013, 98, 233-236.	1.4	0
165	QENS-WINS, Autrans, May 11â€“16, 2014. Neutron News, 2014, 25, 14-15.	0.2	0