

Yong Q Cai

List of Publications by Year in descending order

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72
papers

1,485
citations

279798

23
h-index

330143

37
g-index

73
all docs

73
docs citations

73
times ranked

1391
citing authors

#	ARTICLE	IF	CITATIONS
1	X-ray Raman scattering study of MgSiO ₃ glass at high pressure: Implication for triclustered MgSiO ₃ melt in Earth's mantle. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 7925-7929.	7.1	123
2	X-ray-Induced Dissociation of H ₂ O and Formation of an O ₂ -H ₂ Alloy at High Pressure. Science, 2006, 314, 636-638.	12.6	84
3	Electronic bonding transition in compressed SiO ₂ glass. Physical Review B, 2007, 75, .	3.2	81
4	Magnetic and structural phase transition in Fe monitored by x-ray emission spectroscopy. Physical Review B, 1999, 60, 14510-14512.	3.2	79
5	Inelastic x-ray scattering study of the state-resolved differential cross section of Compton excitations in helium atoms. Physical Review A, 2010, 82, .	2.5	69
6	Revealing the mechanism of passive transport in lipid bilayers via phonon-mediated nanometre-scale density fluctuations. Nature Communications, 2016, 7, 11575.	12.8	60
7	Localized and Delocalized Excitons: Resonant Inelastic X-Ray Scattering in La ₂ SrNiO ₄ and La ₂ SrCuO ₄ . Physical Review Letters, 2006, 96, 157004.	7.8	55
8	Inelastic x-ray scattering study on the single excitations of helium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 025203.	1.5	48
9	Electron-Lattice Interaction on Ca(010). Physical Review Letters, 1998, 81, 1670-1673.	7.8	47
10	Spin transition of ferric iron in Al-bearing Mg-perovskite up to 200 GPa and its implication for the lower mantle. Earth and Planetary Science Letters, 2012, 317-318, 407-412.	4.4	47
11	The Frenkel Line: a direct experimental evidence for the new thermodynamic boundary. Scientific Reports, 2015, 5, 15850.	3.3	47
12	Revealing the Mechanism of the Viscous-to-Elastic Crossover in Liquids. Journal of Physical Chemistry Letters, 2015, 6, 3048-3053.	4.6	42
13	Unified phonon-based approach to the thermodynamics of solid, liquid and gas states. Annals of Physics, 2015, 363, 221-242.	2.8	41
14	Coordination environment of silicon in silica glass up to 74 GPa: An x-ray Raman scattering study at the silicon L edge. Physical Review B, 2008, 78, .	3.2	38
15	Low-Energy Charge-Density Excitations in MgB ₂ : Striking Interplay between Single-Particle and Collective Behavior for Large Momenta. Physical Review Letters, 2006, 97, 176402.	7.8	33
16	Thermally triggered phononic gaps in liquids at THz scale. Scientific Reports, 2016, 6, 19469.	3.3	31
17	The Ultrahigh Resolution IXS Beamline of NSLS-II: Recent Advances and Scientific Opportunities. Journal of Physics: Conference Series, 2013, 425, 202001.	0.4	30
18	Pressure-Induced Valence Anomaly in TmTe Probed by Resonant Inelastic X-Ray Scattering. Physical Review Letters, 2008, 101, 127401.	7.8	27

#	ARTICLE	IF	CITATIONS
19	Charge transfer and dd excitations in transition metal oxides. European Physical Journal B, 2009, 70, 157-162.	1.5	26
20	Electronic Structure of Crystalline ^4He at High Pressures. Physical Review Letters, 2010, 105, 186404.	7.8	26
21	Emergent Optical Phononic Modes upon Nanoscale Mesogenic Phase Transitions. Nano Letters, 2017, 17, 3870-3876.	9.1	26
22	Molecular Picture of the Transient Nature of Lipid Rafts. Langmuir, 2020, 36, 4887-4896.	3.5	26
23	An X-ray Raman spectrometer for EXAFS studies of minerals: bent Laue spectrometer with 20 keV X-rays. Journal of Synchrotron Radiation, 2013, 20, 266-271.	2.4	25
24	Electronic structure of carbon dioxide under pressure and insights into the molecular-to-nonmolecular transition. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18402-18406.	7.1	24
25	Anomalous Angular Dependence of the Dynamic Structure Factor near Bragg Reflections: Graphite. Physical Review Letters, 2008, 101, 266406.	7.8	23
26	Functional lipid pairs as building blocks of phase-separated membranes. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 4749-4757.	7.1	20
27	X-ray Raman scattering for structural investigation of silica/silicate minerals. Physics and Chemistry of Minerals, 2009, 36, 171-181.	0.8	19
28	dd excitations in three-dimensional q-space: A nonresonant inelastic X-ray scattering study on NiO. Europhysics Letters, 2011, 96, 37007.	2.0	19
29	Dispersive spread of virtual sources by asymmetric X-ray monochromators. Journal of Applied Crystallography, 2012, 45, 255-262.	4.5	18
30	Tracing X-rays through an L-shaped laterally graded multilayer mirror: a synchrotron application. Journal of Synchrotron Radiation, 2010, 17, 352-359.	2.4	17
31	High-pressure evolution of Fe_2O_3 structure revealed by x-ray absorption. Physical Review B, 2010, 82, .	1.2	16
32	Synchrotron X-ray tests of an L-shaped laterally graded multilayer mirror for the analyzer system of the ultra-high-resolution IXS spectrometer at ANSLs-II. Journal of Synchrotron Radiation, 2011, 18, 862-870.	2.4	16
33	Terasonic Excitations in 2D Gold Nanoparticle Arrays in a Water Matrix as Revealed by Atomistic Simulations. Journal of Physical Chemistry C, 2016, 120, 19896-19903.	3.1	16
34	Crossover from picosecond collective to single particle dynamics defines the mechanism of lateral lipid diffusion. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 2446-2455.	2.6	16
35	High-quality quartz single crystals for high-energy-resolution inelastic X-ray scattering analyzers. Journal of Applied Crystallography, 2013, 46, 939-944.	4.5	14
36	Damping Off Terahertz Sound Modes of a Liquid upon Immersion of Nanoparticles. ACS Nano, 2018, 12, 8867-8874.	14.6	14

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37	Photoelectron Spectroscopic Study of Coadsorbed States of Cs and O on GaAs(100). Journal of the Physical Society of Japan, 1997, 66, 2798-2804.	1.6	13
38	High-Pressure Studies by X-ray Raman Scattering. Synchrotron Radiation News, 2010, 23, 26-31.	0.8	12
39	The onset of shear modes in the high frequency spectrum of simple disordered systems: current knowledge and perspectives. Philosophical Magazine, 2016, 96, 732-742.	1.6	11
40	Structural and microscopic relaxations in glycerol: An inelastic x-ray scattering study. Journal of Chemical Physics, 2011, 134, 184502.	3.0	10
41	Multiple-Wave Diffraction in High Energy Resolution Back-Reflecting X-Ray Optics. Physical Review Letters, 2011, 107, 155503.	7.8	8
42	Construction of a quartz spherical analyzer: application to high-resolution analysis of the Ni $K\alpha_1$ emission spectrum. Journal of Applied Crystallography, 2016, 49, 1443-1453.	4.5	8
43	Shaping the terahertz sound propagation in water under highly directional confinement. Physical Review B, 2020, 101, .	3.2	8
44	Performance of a collimating L-shaped laterally graded multilayer mirror for the IXS analyzer system at NSLS-II. Journal of Synchrotron Radiation, 2014, 21, 473-478.	2.4	8
45	The Terahertz Dynamics of an Aqueous Nanoparticle Suspension: An Inelastic X-ray Scattering Study. Nanomaterials, 2020, 10, 860.	4.1	7
46	Signature of a polyamorphic transition in the THz spectrum of vitreous GeO ₂ . Scientific Reports, 2015, 5, 14996.	3.3	6
47	Nanoscale Q -Resolved Phonon Dynamics in Block Copolymers. ACS Applied Nano Materials, 2018, 1, 4918-4926.	5.0	6
48	Onset of interfacial waves in the terahertz spectrum of a nanoparticle suspension. Physical Review E, 2020, 102, 022601.	2.1	6
49	Cost-effective upgrade of a focusing system for inelastic X-ray scattering experiments under high pressure. Journal of Synchrotron Radiation, 2008, 15, 50-54.	2.4	5
50	Partially coherent wavefront propagation simulations for inelastic x-ray scattering beamline including crystal optics. , 2014, , .		5
51	Parametric Optimization of Undulators for NSLS-II Project Beamlines. AIP Conference Proceedings, 2010, , .	0.4	4
52	Evolution of a Novel Ribbon Phase in Optimally Doped Bi ₂ Sr ₂ CaCu ₂ O ₈ + δ at High Pressure and Its Implication to High-T _C Superconductivity. Journal of Physical Chemistry Letters, 2018, 9, 4182-4188.	4.6	4
53	$\text{Cu} \times \text{Ni}$	3.2	3
54	Initial performances of first undulator-based hard x-ray beamlines of NSLS-II compared to simulations. AIP Conference Proceedings, 2016, , .	0.4	3

#	ARTICLE	IF	CITATIONS
55	Achieving 3D imaging through focus stacking. AIP Conference Proceedings, 2019, , .	0.4	3
56	Simulation of an IXS imaging analyzer with an extended scattering source. , 2016, , .		2
57	Circular dichroism in the angular distribution of core-level photoelectrons from GaAs (111). Journal of Electron Spectroscopy and Related Phenomena, 1998, 88-91, 219-223.	1.7	1
58	Use of deep reactive ion etching in the fabrication of high-efficiency high-resolution crystal x-ray analyzers. , 2002, , .		1
59	Observation of strain and temperature induced changes in the band structure of thin La _{0.8} MnO ₃ films. Applied Physics Letters, 2007, 90, 101915.	3.3	1
60	Sagittal focusing inducing energy structure in medium to high energy resolution x-ray monochromators. Proceedings of SPIE, 2013, , .	0.8	1
61	Realizing an Analyzer Instrument for Medium-energy Sub-meV IXS. Journal of Physics: Conference Series, 2013, 425, 052032.	0.4	1
62	Ultrahigh energy resolution focusing monochromator for inelastic x-ray scattering spectrometer. Optics Express, 2015, 23, 31607.	3.4	1
63	On-axis microscopes for the inelastic x-ray scattering beamline at NSLS-II. AIP Conference Proceedings, 2016, , .	0.4	1
64	Signature of Many-Body Localization of Phonons in Strongly Disordered Superlattices. Nano Letters, 2021, 21, 7419-7425.	9.1	1
65	Altering Terahertz Sound Propagation in a Liquid upon Nanoparticle Immersion. Nanomaterials, 2022, 12, 2401.	4.1	1
66	Development of ultrahigh-resolution inelastic x-ray scattering optics. Proceedings of SPIE, 2008, , .	0.8	0
67	Resonant inelastic X-ray scattering of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" overflow="scroll" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mtext} \rangle \text{La} \langle \text{mml:mtext} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mtext} \rangle$ Physica C: Superconductivity and Its Applications, 2010, 470, S155-S157.	1.2	0
68	Dynamical modeling of high-energy-resolution x-ray optics. Proceedings of SPIE, 2011, , .	0.8	0
69	Thermo-mechanical analyses of beryllium compound refractive lens for NSLS-II beamline. Diamond Light Source Proceedings, 2011, 1, .	0.1	0
70	Compact pseudo-2D strip detector system for sub-meV IXS. Journal of Physics: Conference Series, 2014, 493, 012015.	0.4	0
71	Simulation of the ultrahigh energy resolution IXS analyzer system at NSLS-II. Proceedings of SPIE, 2014, , .	0.8	0
72	X-ray back-diffraction: can we further increase the energy resolution by tuning the energy slightly below that of exact backscattering?. Journal of Applied Crystallography, 2019, 52, 1321-1328.	4.5	0