

Christian Sternemann

List of Publications by Year in descending order

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121
papers

3,482
citations

172207

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123
all docs

123
docs citations

123
times ranked

4339
citing authors

#	ARTICLE	IF	CITATIONS
1	Step-by-Step Route for the Synthesis of Metal-Organic Frameworks. Journal of the American Chemical Society, 2007, 129, 15118-15119.	6.6	811
2	Microscopic structure of water at elevated pressures and temperatures. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 6301-6306.	3.3	127
3	Intercalation in Layered Metal-Organic Frameworks: Reversible Inclusion of an Extended π -System. Journal of the American Chemical Society, 2011, 133, 8158-8161.	6.6	116
4	Effect of Osmolytes on Pressure-Induced Unfolding of Proteins: A High-Pressure SAXS Study. ChemPhysChem, 2008, 9, 2809-2815.	1.0	104
5	Control of structural flexibility of layered-pillared metal-organic frameworks anchored at surfaces. Nature Communications, 2019, 10, 346.	5.8	93
6	Different Breathing Mechanisms in Flexible Pillared-Layered Metal-Organic Frameworks: Impact of the Metal Center. Chemistry of Materials, 2018, 30, 1667-1676.	3.2	76
7	A Solid-Solution Approach to Mixed-Metal Metal-Organic Frameworks – Detailed Characterization of Local Structures, Defects and Breathing Behaviour of Al/V Frameworks. European Journal of Inorganic Chemistry, 2013, 2013, 4546-4557.	1.0	69
8	The new diffractometer for surface X-ray diffraction at beamline BL9 of DELTA. Journal of Synchrotron Radiation, 2006, 13, 8-13.	1.0	67
9	The Carbon Dioxide-Water Interface at Conditions of Gas Hydrate Formation. Journal of the American Chemical Society, 2009, 131, 585-589.	6.6	66
10	The small-angle and wide-angle X-ray scattering set-up at beamline BL9 of DELTA. Journal of Synchrotron Radiation, 2007, 14, 244-251.	1.0	61
11	Stress-Induced Stabilization of Crystals in Shape Memory Natural Rubber. Macromolecular Rapid Communications, 2013, 34, 180-184.	2.0	57
12	Frustrated flexibility in metal-organic frameworks. Nature Communications, 2021, 12, 4097.	5.8	55
13	Tetrahydrofuran Clathrate Hydrate Formation. Physical Review Letters, 2009, 103, 218301.	2.9	50
14	Multiple phase-transitions upon selective CO ₂ adsorption in an alkyl ether functionalized metal-organic framework – an in situ X-ray diffraction study. CrystEngComm, 2011, 13, 6399.	1.3	50
15	An extraction algorithm for core-level excitations in non-resonant inelastic X-ray scattering spectra. Journal of Synchrotron Radiation, 2008, 15, 162-169.	1.0	47
16	Step-by-step growth of highly oriented and continuous seeding layers of [Cu ₂ (ndc) ₂ (dabco)] on bare oxide and nitride substrates. CrystEngComm, 2010, 12, 2086.	1.3	45
17	Subsurface Influence on the Structure of Protein Adsorbates as Revealed by in Situ X-ray Reflectivity. Langmuir, 2012, 28, 7747-7756.	1.6	45
18	Shake-up valence excitations in CuO by resonant inelastic x-ray scattering. Physical Review B, 2004, 70, .	1.1	42

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19	3dspectator hole satellites of the CuK ² _{1,3} andK ² _{2,5} emission spectrum. Physical Review A, 2004, 70, .	1.0	40
20	The influence of X-ray coherence length on TXRF and XSW and the characterization of nanoparticles observed under grazing incidence of X-rays. Journal of Analytical Atomic Spectrometry, 2009, 24, 792.	1.6	40
21	Exploring the Interfacial Structure of Protein Adsorbates and the Kinetics of Protein Adsorption: An In Situ High-Energy X-ray Reflectivity Study. Langmuir, 2008, 24, 10216-10221.	1.6	38
22	Magma properties at deep Earth's conditions from electronic structure of silica. Geochemical Perspectives Letters, 0, , 32-37.	1.0	37
23	Momentum-transfer dependence of x-ray Raman scattering at the Be K-edge. Physical Review B, 2003, 68, .	1.1	34
24	X-ray Raman scattering at the Ledges of elemental Na, Si, and the Nedge of Ba in Ba ₈ Si ₄₆ . Physical Review B, 2005, 72, .	1.1	34
25	Synchrotron radiation induced X-ray standing waves analysis of layered structures. Applied Surface Science, 2007, 253, 3533-3542.	3.1	34
26	Self-assembled iron oxide nanoparticle multilayer: x-ray and polarized neutron reflectivity. Nanotechnology, 2012, 23, 055707.	1.3	34
27	Spectroscopy of low and intermediate Z elements at extreme conditions: in situ studies of Earth materials at pressure and temperature via X-ray Raman scattering. High Pressure Research, 2016, 36, 275-292.	0.4	33
28	X-ray standing waves: a method for thin layered systems. Journal of Analytical Atomic Spectrometry, 2006, 21, 1136-1142.	1.6	31
29	Phase separation and Si nanocrystal formation in bulk SiO studied by x-ray scattering. Applied Physics Letters, 2010, 96, .	1.5	30
30	X-ray reflectivity measurements of liquid/solid interfaces under high hydrostatic pressure conditions. Journal of Synchrotron Radiation, 2014, 21, 76-81.	1.0	30
31	Process characteristics, particle behavior and coating properties during HVOF spraying of conventional, fine and nanostructured WC-12Co powders. Surface and Coatings Technology, 2021, 405, 126716.	2.2	29
32	An access to buried interfaces: the X-ray reflectivity set-up of BL9 at DELTA. Journal of Synchrotron Radiation, 2008, 15, 600-605.	1.0	27
33	Temperature-Driven Adsorption and Desorption of Proteins at Solid-Liquid Interfaces. Langmuir, 2014, 30, 2077-2083.	1.6	27
34	On the X-ray Scattering Pre-peak of Linear Mono-ols and the Related Microstructure from Computer Simulations. Journal of Physical Chemistry B, 2020, 124, 8358-8371.	1.2	27
35	Evolution of the germanium K ² _{1,3} x-ray satellites from threshold to saturation. Physical Review A, 2000, 61, .	1.0	26
36	Correlation-Induced Double-Plasmon Excitation in Simple Metals Studied by Inelastic X-Ray Scattering. Physical Review Letters, 2005, 95, 157401.	2.9	26

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37	Pressure driven spin transition in siderite and magnesiosiderite single crystals. <i>Scientific Reports</i> , 2017, 7, 16526.	1.6	24
38	Final-state interaction in Compton scattering from electron liquids. <i>Physical Review B</i> , 2000, 62, R7687-R7690.	1.1	23
39	Near-edge structure of nonresonant inelastic x-ray scattering from L-shell core levels studied by a real-space multiple-scattering approach. <i>Physical Review B</i> , 2007, 75, .	1.1	23
40	In situ characterization of the decomposition behavior of $\text{Mg}(\text{BH}_4)_2$ by X-ray Raman scattering spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 5397-5403.	1.3	22
41	Investigation on the oxidation behavior of AlCrVxN thin films by means of synchrotron radiation and influence on the high temperature friction. <i>Applied Surface Science</i> , 2018, 427, 511-521.	3.1	22
42	Effect of thermal vibration and the solid-liquid phase transition on electron dynamics: An inelastic x-ray-scattering study on Al. <i>Physical Review B</i> , 1998, 57, 622-626.	1.1	21
43	Temperature influence on the valence Compton profiles of aluminum and lithium. <i>Physical Review B</i> , 2001, 63, .	1.1	21
44	Connecting structurally and dynamically detected signatures of supramolecular Debye liquids. <i>Journal of Chemical Physics</i> , 2017, 147, 234501.	1.2	21
45	Phase separation and nanocrystal formation in GeO. <i>Applied Physics Letters</i> , 2009, 95, 021910.	1.5	20
46	Pressure-Induced Changes on The Electronic Structure and Electron Topology in the Direct FCC \rightarrow SH Transformation of Silicon. <i>Journal of Physical Chemistry C</i> , 2014, 118, 1161-1166.	1.5	20
47	Influence of etching-pretreatment on nano-grained WC-Co surfaces and properties of PVD/HVOF duplex coatings. <i>Surface and Coatings Technology</i> , 2019, 374, 32-43.	2.2	20
48	Investigation of the influence of the vanadium content on the high temperature tribo-mechanical properties of DC magnetron sputtered AlCrVN thin films. <i>Surface and Coatings Technology</i> , 2017, 328, 172-181.	2.2	19
49	The barium giant dipole resonance in barite: a study of soft X-ray absorption edges using hard X-rays. <i>Journal of Analytical Atomic Spectrometry</i> , 2008, 23, 807.	1.6	18
50	Pressure induced spin transition revealed by iron $M_{2,3}$ -edge spectroscopy. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	18
51	Supramolecular x-ray signature of susceptibility amplification in hydrogen-bonded liquids. <i>Physical Review E</i> , 2014, 90, 052807.	0.8	18
52	Iron speciation in minerals and glasses probed by $M_{2/3}$ -edge X-ray Raman scattering spectroscopy. <i>Contributions To Mineralogy and Petrology</i> , 2014, 167, 1.	1.2	18
53	Intramolecular structure and energetics in supercooled water down to 255 K. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 6925-6930.	1.3	18
54	Ultrathin Films of 2D Hofmann-Type Coordination Polymers: Influence of Pillaring Linkers on Structural Flexibility and Vertical Charge Transport. <i>Chemistry of Materials</i> , 2019, 31, 7277-7287.	3.2	18

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55	Structure and dynamics of short-chain polymerized ionic liquids. <i>Journal of Chemical Physics</i> , 2019, 151, 034903.	1.2	18
56	Influence of lattice dynamics on electron momentum density of lithium. <i>Journal of Physics and Chemistry of Solids</i> , 2000, 61, 379-382.	1.9	17
57	Pressure-induced electron topological transitions in Ba-doped Si clathrate. <i>Physical Review B</i> , 2011, 84, .	1.1	17
58	On the Origin of Microtubules' High-Pressure Sensitivity. <i>Biophysical Journal</i> , 2018, 114, 1080-1090.	0.2	17
59	Combining X-ray $K_{1,3}$, valence-to-core, and X-ray Raman spectroscopy for studying Earth materials at high pressure and temperature: the case of siderite. <i>Journal of Analytical Atomic Spectrometry</i> , 2019, 34, 384-393.	1.6	17
60	Persistent Octahedral Coordination in Amorphous GeO_2 Up to 100 GPa by X-ray Compton Scattering. <i>Physical Review Letters</i> , 2018, 121, 055701.	2.8	17
61	Anomalous Energetics in Tetrahydrofuran Clathrate Hydrate Revealed by X-ray Compton Scattering. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 2832-2836.	2.1	16
62	Performance of fluorene and terthiophene copolymer in bilayer photovoltaic devices: The role of the polymer conformations. <i>Organic Electronics</i> , 2012, 13, 2716-2726.	1.4	15
63	Miniature diamond anvils for X-ray Raman scattering spectroscopy experiments at high pressure. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 276-282.	1.0	15
64	High-momentum components and temperature dependence of the Compton profile of beryllium. <i>Physical Review B</i> , 2002, 66, .	1.1	14
65	Charge transfer in silicon clathrates studied by Compton scattering. <i>Physical Review B</i> , 2007, 76, .	1.1	14
66	Formation of CaB_6 in the thermal decomposition of the hydrogen storage material $Ca(BH_4)_2$. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 19866-19872.	1.3	14
67	A portable on-axis laser-heating system for near-90° X-ray spectroscopy: application to ferropericlasite and iron silicide. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 414-424.	1.0	14
68	X-ray Raman scattering at the Si LII,III-edge of bulk amorphous SiO. <i>Journal of Physics and Chemistry of Solids</i> , 2005, 66, 2277-2280.	1.9	13
69	Electronic structure of methane hydrate studied by Compton scattering. <i>Physical Review B</i> , 2006, 73, .	1.1	13
70	Electron-density dependence of double-plasmon excitations in simple metals. <i>Physical Review B</i> , 2008, 77, .	1.1	13
71	Temperature-induced obliteration of sub-oxide interfaces in amorphous GeO. <i>Journal of Non-Crystalline Solids</i> , 2009, 355, 1285-1287.	1.5	13
72	Analysis of the Ion Distribution at a Charged Solid-Liquid Interface Using X-ray Standing Waves. <i>Langmuir</i> , 2010, 26, 959-966.	1.6	13

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73	Suboxide interface in disproportionating α -SiO ₂ studied by x-ray Raman scattering. Physical Review B, 2010, 81, .	1.1	13
74	Strong deviations from jellium behavior in the valence electron dynamics of potassium. Physical Review B, 2009, 80, .	1.1	12
75	Temperature-Induced Structural Changes of Tetrahydrofuran Clathrate and of the Liquid Water/Tetrahydrofuran Mixture. Journal of Physical Chemistry C, 2011, 115, 21009-21015.	1.5	12
76	Compton scattering of elemental silicon at high pressure. Applied Physics Letters, 2005, 87, 191905.	1.5	11
77	Giant dipole resonance of Ba in Ba ₈ Si ₄₆ : An approach for studying high-pressure induced phase transitions of nanostructured materials. Physical Review B, 2007, 75, .	1.1	11
78	Cation Hydration in Supercritical NaOH and HCl Aqueous Solutions. Journal of Physical Chemistry B, 2017, 121, 11383-11389.	1.2	11
79	Hydration in aqueous osmolyte solutions: the case of TMAO and urea. Physical Chemistry Chemical Physics, 2020, 22, 11614-11624.	1.3	11
80	Adsorption of nanoparticles at the solid-liquid interface. Journal of Colloid and Interface Science, 2012, 374, 287-290.	5.0	10
81	Structural changes in amorphous Ge _x Si _{1-x} O _y on the way to nanocrystal formation. Nanotechnology, 2013, 24, 165701.	1.3	9
82	X-ray Raman scattering: An exciting tool for the study of matter at conditions of the Earth's interior. Journal of Physics: Conference Series, 2013, 425, 202011.	0.3	9
83	Bulk sensitive determination of the Fe ³⁺ /Fe ^{Tot} -ratio in minerals by Fe L _{2/3} -edge X-ray Raman scattering. Journal of Analytical Atomic Spectrometry, 2016, 31, 815-820.	1.6	9
84	Isomeric effects in structure formation and dielectric dynamics of different octanols. Physical Chemistry Chemical Physics, 2021, 23, 24211-24221.	1.3	9
85	High-resolution Compton line shapes: Fermi break of beryllium. Physical Review B, 2007, 76, .	1.1	8
86	Influence of hydrogen on thermally induced phase separation in GeO/SiO ₂ multilayers. Nanotechnology, 2011, 22, 125709.	1.3	8
87	A high pressure study of calmodulin-ligand interactions using small-angle X-ray and elastic incoherent neutron scattering. Physical Chemistry Chemical Physics, 2018, 20, 3514-3522.	1.3	8
88	Density variations of TMAO solutions in the kilobar range: Experiments, PC-SAFT predictions, and molecular dynamics simulations. Biophysical Chemistry, 2019, 253, 106222.	1.5	8
89	Reorientational dynamics of trimethoxyboroxine: A molecular glass former studied by dielectric spectroscopy and ¹¹ B nuclear magnetic resonance. Journal of Chemical Physics, 2020, 152, 034503.	1.2	8
90	A sample cell to study hydrate formation with x-ray scattering. Review of Scientific Instruments, 2009, 80, 026103.	0.6	7

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109	Cholesterol modulates the pressure response of DMPC membranes. Biophysical Chemistry, 2019, 252, 106210.	1.5	3
110	Pressure stability of the first hydration shell of yttrium in aqueous YCl ₃ solution. High Pressure Research, 2020, 40, 194-204.	0.4	3
111	Transition from elastic to plastic strain release in core-shell nanowires revealed by in-plane x-ray diffraction. Nanotechnology, 2021, 32, 205705.	1.3	3
112	Nanocrystal-matrix interaction in mixtures of KCN+Kl investigated by x-ray diffraction. Physical Review B, 2005, 72, .	1.1	2
113	Experimental Endstation of Beamline BL9 at DELTA. AIP Conference Proceedings, 2007, , .	0.3	2
114	Charge excitations in stripe-ordered La _{5/3} Sr ₂ NiO ₇ . Physical Review B, 2011, .	1.1	2
115	Study of time and pressure dependent phenomena at the hard x-ray beamline BL9 of DELTA. Journal of Physics: Conference Series, 2013, 425, 202006.	0.3	2
116	Composition-Structure-Property Relations in Au ₃₅ Cu ₄₉ Al ₁₆ Shape Memory Thin Films. Shape Memory and Superelasticity, 2016, 2, 80-85.	1.1	2
117	Reflective imaging, on-axis laser heating and radiospectrometry of samples in diamond anvil cells with a parabolic mirror. High Pressure Research, 2021, 41, 142-154.	0.4	2
118	Status Of The Synchrotron Light Source DELTA. AIP Conference Proceedings, 2004, , .	0.3	1
119	The New X-Ray Lithography Beamline BL1 At DELTA. AIP Conference Proceedings, 2010, , .	0.3	1
120	Publisher's Note: Charge transfer in silicon clathrates studied by Compton scattering [Phys. Rev. B, 2007, 76, 233104 (2007)]. Physical Review B, 2008, 77, .	1.1	0
121	Hydration in aqueous NaCl. Physical Chemistry Chemical Physics, 0, , .	1.3	0