

Christian Sternemann

List of Publications by Year in descending order

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121
papers

3,482
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123
times ranked

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#	ARTICLE	IF	CITATIONS
1	<p><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi>Fe</mml:mi></mml:mrow><mml:mrow><mml:mi>α</mml:mi></mml:mrow></mml:math> -hosting carbon phases in the deep Earth. Physical Review B, 2022, 105, .</p>		
2	Structural and electron spin state changes in an x-ray heated iron carbonate system at the Earth's lower mantle pressures. Physical Review Research, 2022, 4, .	1.3	6
3	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
4	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
5	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
6	Frustrated flexibility in metal-organic frameworks. Nature Communications, 2021, 12, 4097.	5.8	55
7	Ion association in hydrothermal aqueous NaCl solutions: implications for the microscopic structure of supercritical water. Physical Chemistry Chemical Physics, 2021, 23, 14845-14856.	1.3	5
8	Isomeric effects in structure formation and dielectric dynamics of different octanols. Physical Chemistry Chemical Physics, 2021, 23, 24211-24221.	1.3	9
9	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
10	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
11	Pressure stability of the first hydration shell of yttrium in aqueous YCl_3 solution. High Pressure Research, 2020, 40, 194-204.	0.4	3
12	Hydration in aqueous osmolyte solutions: the case of TMAO and urea. Physical Chemistry Chemical Physics, 2020, 22, 11614-11624.	1.3	11
13	A portable on-axis laser-heating system for near- 90° X-ray spectroscopy: application to ferroperricite and iron silicide. Journal of Synchrotron Radiation, 2020, 27, 414-424.	1.0	14
14	Ultrathin Films of 2D Hofmann-Type Coordination Polymers: Influence of Pillaring Linkers on Structural Flexibility and Vertical Charge Transport. Chemistry of Materials, 2019, 31, 7277-7287.	3.2	18
15	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
16	Structure and dynamics of short-chain polymerized ionic liquids. Journal of Chemical Physics, 2019, 151, 034903.	1.2	18
17	Control of structural flexibility of layered-pillared metal-organic frameworks anchored at surfaces. Nature Communications, 2019, 10, 346.	5.8	93
18	Combining X-ray $K\beta$, valence-to-core, and X-ray Raman spectroscopy for studying Earth materials at high pressure and temperature: the case of siderite. Journal of Analytical Atomic Spectrometry, 2019, 34, 384-393.	1.6	17

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19	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
20	Cholesterol modulates the pressure response of DMPC membranes. <i>Biophysical Chemistry</i> , 2019, 252, 106210.	1.5	3
21	Persistent Octahedral Coordination in Amorphous GeO_2 Up to 100 GPa by K^+	2.8	17
22	Different Breathing Mechanisms in Flexible Pillared-Layered Metal-Organic Frameworks: Impact of the Metal Center. <i>Chemistry of Materials</i> , 2018, 30, 1667-1676.	3.2	76
23	A high pressure study of calmodulin-ligand interactions using small-angle X-ray and elastic incoherent neutron scattering. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 3514-3522.	1.3	8
24	On the Origin of Microtubules' High-Pressure Sensitivity. <i>Biophysical Journal</i> , 2018, 114, 1080-1090.	0.2	17
25	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
26	Completing the Series: New Coordination Networks of Composition $\text{RE}_3(\text{ADC})_3(\text{H}_2\text{O})_6 \cdot 2\text{H}_2\text{O}$ with $\text{RE} = \text{Pr, Nd, Sm, Eu, Tb, Dy, Ho, Er, Y}$ and $\text{ADC} = \text{Acetylenedicarboxylate}$ ($\text{O}_2\text{C-C}\equiv\text{C-CO}_2$). <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2018, 644, 127-135.	0.6	7
27	Scaling of Suprastructure and Dynamics in Pure and Mixed Debye Liquids. <i>Advances in Dielectrics</i> , 2018, , 121-171.	1.2	6
28	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
29	Temperature dependence of the hydrogen bond network in trimethylamine N-oxide and guanidine hydrochloride-water solutions. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 28470-28475.	1.3	7
30	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
31	Pressure driven spin transition in siderite and magnesiosiderite single crystals. <i>Scientific Reports</i> , 2017, 7, 16526.	1.6	24
32	Cation Hydration in Supercritical NaOH and HCl Aqueous Solutions. <i>Journal of Physical Chemistry B</i> , 2017, 121, 11383-11389.	1.2	11
33	Connecting structurally and dynamically detected signatures of supramolecular Debye liquids. <i>Journal of Chemical Physics</i> , 2017, 147, 234501.	1.2	21
34	The detachment behavior of polycarbonate on thin films above the glass transition temperature. <i>Polymer Engineering and Science</i> , 2016, 56, 786-797.	1.5	3
35	Polaron-induced lattice distortion of (In,Ga)As/GaAs quantum dots by optically excited carriers. <i>Nanotechnology</i> , 2016, 27, 425702.	1.3	6
36	Spectroscopy of low and intermediate Z elements at extreme conditions: <i>in situ</i> studies of Earth materials at pressure and temperature via X-ray Raman scattering. <i>High Pressure Research</i> , 2016, 36, 275-292.	0.4	33

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37	Formation of CaB ₆ in the thermal decomposition of the hydrogen storage material Ca(BH ₄) ₂ . Physical Chemistry Chemical Physics, 2016, 18, 19866-19872.	1.3	14
38	PDMS embedded Ag clusters: Coalescence and cluster-matrix interaction. Journal of Physics: Conference Series, 2016, 712, 012068.	0.3	4
39	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
40	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
41	In situ characterization of the decomposition behavior of Mg(BH ₄) ₂ by X-ray Raman scattering spectroscopy. Physical Chemistry Chemical Physics, 2016, 18, 5397-5403.	1.3	22
42	Intramolecular structure and energetics in supercooled water down to 255 K. Physical Chemistry Chemical Physics, 2016, 18, 6925-6930.	1.3	18
43	Pressure induced spin transition revealed by iron M _{2,3} -edge spectroscopy. Applied Physics Letters, 2014, 104, .	1.5	18
44	Supramolecular x-ray signature of susceptibility amplification in hydrogen-bonded liquids. Physical Review E, 2014, 90, 052807.	0.8	18
45	The Ba 4d-4f giant dipole resonance in complex Ba/Si compounds. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 045102.	0.6	7
46	Iron speciation in minerals and glasses probed by $M_{2/3}$ M _{2/3} -edge X-ray Raman scattering spectroscopy. Contributions To Mineralogy and Petrology, 2014, 167, 1.	1.2	18
47	Pressure-Induced Changes on The Electronic Structure and Electron Topology in the Direct FCC \rightarrow SH Transformation of Silicon. Journal of Physical Chemistry C, 2014, 118, 1161-1166.	1.5	20
48	Temperature-Driven Adsorption and Desorption of Proteins at Solid-Liquid Interfaces. Langmuir, 2014, 30, 2077-2083.	1.6	27
49	X-ray reflectivity measurements of liquid/solid interfaces under high hydrostatic pressure conditions. Journal of Synchrotron Radiation, 2014, 21, 76-81.	1.0	30
50	CsNa ₂ , CsK ₂ , CsRbC ₂ - Syntheses and Crystal Structures of Three New Acetylides. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2013, 639, 2804-2808.	0.6	4
51	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
52	Stress-Induced Stabilization of Crystals in Shape Memory Natural Rubber. Macromolecular Rapid Communications, 2013, 34, 180-184.	2.0	57
53	Structural changes in amorphous Ge _x Si _{1-x} on the way to nanocrystal formation. Nanotechnology, 2013, 24, 165701.	1.3	9
54	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

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55	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
56	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
57	Self-assembled iron oxide nanoparticle multilayer: x-ray and polarized neutron reflectivity. Nanotechnology, 2012, 23, 055707.	1.3	34
58	Performance of fluorene and terthiophene copolymer in bilayer photovoltaic devices: The role of the polymer conformations. Organic Electronics, 2012, 13, 2716-2726.	1.4	15
59	Subsurface Influence on the Structure of Protein Adsorbates as Revealed by in Situ X-ray Reflectivity. Langmuir, 2012, 28, 7747-7756.	1.6	45
60	Adsorption of nanoparticles at the solid-liquid interface. Journal of Colloid and Interface Science, 2012, 374, 287-290.	5.0	10
61	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
62	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
63	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
64	Influence of hydrogen on thermally induced phase separation in GeO/SiO ₂ multilayers. Nanotechnology, 2011, 22, 125709.	1.3	8
65	Pressure-induced electron topological transitions in Ba-doped Si clathrate. Physical Review B, 2011, 84, .	1.1	17
66	Ge-Si-O phase separation and Ge nanocrystal growth in Ge:SiO ₂ /SiO ₂ multilayers-a new dc magnetron approach. Nanotechnology, 2011, 22, 485303.	1.3	6
67	$\text{Sr}_{1-x}\text{Ni}_x\text{O}_{2-y}$ thin films: A new dc magnetron approach. Physical Review B, 2011, 84, 045411.	1.1	2
68	The New X-Ray Lithography Beamline BL1 At DELTA. AIP Conference Proceedings, 2010, , .	0.3	1
69	EuxSr _{1-x} C ₂ (0 ≤ x ≤ 1): A Dicarbide Solid Solution with Perfect Vegard Behavior. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2010, 636, 2276-2281.	0.6	5
70	Anomalous Energetics in Tetrahydrofuran Clathrate Hydrate Revealed by X-ray Compton Scattering. Journal of Physical Chemistry Letters, 2010, 1, 2832-2836.	2.1	16
71	Analysis of the Ion Distribution at a Charged Solid-Liquid Interface Using X-ray Standing Waves. Langmuir, 2010, 26, 959-966.	1.6	13
72	Suboxide interface in disproportionating SiO_x studied by x-ray Raman scattering. Physical Review B, 2010, 81, .	1.1	13

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73	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
74	Phase separation and Si nanocrystal formation in bulk SiO studied by x-ray scattering. Applied Physics Letters, 2010, 96, .	1.5	30
75	A sample cell to study hydrate formation with x-ray scattering. Review of Scientific Instruments, 2009, 80, 026103.	0.6	7
76	Tetrahydrofuran Clathrate Hydrate Formation. Physical Review Letters, 2009, 103, 218301.	2.9	50
77	Phase separation and nanocrystal formation in GeO. Applied Physics Letters, 2009, 95, 021910.	1.5	20
78	Strong deviations from jellium behavior in the valence electron dynamics of potassium. Physical Review B, 2009, 80, .	1.1	12
79	The Carbon Dioxide-Water Interface at Conditions of Gas Hydrate Formation. Journal of the American Chemical Society, 2009, 131, 585-589.	6.6	66
80	Temperature-induced obliteration of sub-oxide interfaces in amorphous GeO. Journal of Non-Crystalline Solids, 2009, 355, 1285-1287.	1.5	13
81	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
82	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
83	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
84	Effect of Osmolytes on Pressure-Induced Unfolding of Proteins: A High-Pressure SAXS Study. ChemPhysChem, 2008, 9, 2809-2815.	1.0	104
85	Electron-density dependence of double-plasmon excitations in simple metals. Physical Review B, 2008, 77, .	1.1	13
86	The barium giant dipole resonance in barite: a study of soft X-ray absorption edges using hard X-rays. Journal of Analytical Atomic Spectrometry, 2008, 23, 807.	1.6	18
87	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
88	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
89	Status of the Synchrotron Light Source DELTA. AIP Conference Proceedings, 2007, , .	0.3	3
90	Experimental Endstation of Beamline BL9 at DELTA. AIP Conference Proceedings, 2007, , .	0.3	2

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91	Charge transfer in silicon clathrates studied by Compton scattering. <i>Physical Review B</i> , 2007, 76, .	1.1	14
92	Giant dipole resonance of Ba in Ba ₈ Si ₄₆ : An approach for studying high-pressure induced phase transitions of nanostructured materials. <i>Physical Review B</i> , 2007, 75, .	1.1	11
93	High-resolution Compton line shapes: Fermi break of beryllium. <i>Physical Review B</i> , 2007, 76, .	1.1	8
94	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
95	Step-by-Step Route for the Synthesis of Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2007, 129, 15118-15119.	6.6	811
96	Adsorption of thin isobutane films on silicon investigated by X-ray reflectivity measurements. <i>Thin Solid Films</i> , 2007, 515, 5660-5663.	0.8	3
97	Synchrotron radiation induced X-ray standing waves analysis of layered structures. <i>Applied Surface Science</i> , 2007, 253, 3533-3542.	3.1	34
98	The small-angle and wide-angle X-ray scattering set-up at beamline BL9 of DELTA. <i>Journal of Synchrotron Radiation</i> , 2007, 14, 244-251.	1.0	61
99	X-ray standing waves: a method for thin layered systems. <i>Journal of Analytical Atomic Spectrometry</i> , 2006, 21, 1136-1142.	1.6	31
100	The new diffractometer for surface X-ray diffraction at beamline BL9 of DELTA. <i>Journal of Synchrotron Radiation</i> , 2006, 13, 8-13.	1.0	67
101	Electronic structure of methane hydrate studied by Compton scattering. <i>Physical Review B</i> , 2006, 73, .	1.1	13
102	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
103	An internet-based synchrotron experiment for students measuring the X-ray magnetic circular dichroism of a PtFe alloy. <i>Journal of Synchrotron Radiation</i> , 2005, 12, 246-250.	1.0	6
104	X-ray Raman scattering at the L edges of elemental Na, Si, and the N edge of Ba in Ba ₈ Si ₄₆ . <i>Physical Review B</i> , 2005, 72, .	1.1	34
105	Compton scattering of elemental silicon at high pressure. <i>Applied Physics Letters</i> , 2005, 87, 191905.	1.5	11
106	Correlation-Induced Double-Plasmon Excitation in Simple Metals Studied by Inelastic X-Ray Scattering. <i>Physical Review Letters</i> , 2005, 95, 157401.	2.9	26
107	Wavelength Dispersive Synchrotron Microprobe Used for Material Analysis. <i>Instrumentation Science and Technology</i> , 2005, 33, 137-150.	0.9	4
108	Nanocrystal-matrix interaction in mixtures of KCN+Kl investigated by x-ray diffraction. <i>Physical Review B</i> , 2005, 72, .	1.1	2

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109	3dspectator hole satellites of the CuK ^{21,3} andK ^{22,5} emission spectrum. Physical Review A, 2004, 70, .	1.0	40
110	Shake-up valence excitations inCuOby resonant inelastic x-ray scattering. Physical Review B, 2004, 70, .	1.1	42
111	Status Of The Synchrotron Light Source DELTA. AIP Conference Proceedings, 2004, , .	0.3	1
112	Momentum-transfer dependence of x-ray Raman scattering at the Be K-edge. Physical Review B, 2003, 68, .	1.1	34
113	High-momentum components and temperature dependence of the Compton profile of beryllium. Physical Review B, 2002, 66, .	1.1	14
114	Ultra-high Resolution Compton Scattering of Li Metal: Evaluation with Respect to the Correlation Corrected Occupation Number Density. Zeitschrift Fur Physikalische Chemie, 2001, 215, .	1.4	5
115	Temperature influence on the valence Compton profiles of aluminum and lithium. Physical Review B, 2001, 63, .	1.1	21
116	Influence of lattice dynamics on electron momentum density of lithium. Journal of Physics and Chemistry of Solids, 2000, 61, 379-382.	1.9	17
117	Final-state interaction in Compton scattering from electron liquids. Physical Review B, 2000, 62, R7687-R7690.	1.1	23
118	Evolution of the germaniumK ²² â€²â€²x-ray satellites from threshold to saturation. Physical Review A, 2000, 61, .	1.0	26
119	Effect of thermal vibration and the solid-liquid phase transition on electron dynamics: An inelastic x-ray-scattering study on Al. Physical Review B, 1998, 57, 622-626.	1.1	21
120	Magma properties at deep Earthâ€™s conditions from electronic structure of silica. Geochemical Perspectives Letters, 0, , 32-37.	1.0	37
121	Hydration in aqueous NaCl. Physical Chemistry Chemical Physics, 0, , .	1.3	0