

Alexander Rack

List of Publications by Year in descending order

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215
papers

5,801
citations

61857

43
h-index

106150

65
g-index

221
all docs

221
docs citations

221
times ranked

5706
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental X-Ray Ghost Imaging. <i>Physical Review Letters</i> , 2016, 117, 113902.	2.9	245
2	<i>ANKAphase</i> : software for single-distance phase retrieval from inline X-ray phase-contrast radiographs. <i>Journal of Synchrotron Radiation</i> , 2011, 18, 617-629.	1.0	221
3	Characterising thermal runaway within lithium-ion cells by inducing and monitoring internal short circuits. <i>Energy and Environmental Science</i> , 2017, 10, 1377-1388.	15.6	194
4	High resolution synchrotron-based radiography and tomography using hard X-rays at the BAMline (BESSY II). <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 586, 327-344.	0.7	165
5	LSO-Based Single Crystal Film Scintillator for Synchrotron-Based Hard X-Ray Micro-Imaging. <i>IEEE Transactions on Nuclear Science</i> , 2009, 56, 1412-1418.	1.2	103
6	Trimodal low-dose X-ray tomography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 10199-10204.	3.3	103
7	Tracking Internal Temperature and Structural Dynamics during Nail Penetration of Lithium-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3285-A3291.	1.3	102
8	Status of the hard X-ray microprobe beamline ID22 of the European Synchrotron Radiation Facility. <i>Journal of Synchrotron Radiation</i> , 2012, 19, 10-18.	1.0	95
9	Modelling and experiments to identify high-risk failure scenarios for testing the safety of lithium-ion cells. <i>Journal of Power Sources</i> , 2019, 417, 29-41.	4.0	93
10	The micro-imaging station of the TopoTomo beamline at the ANKA synchrotron light source. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2009, 267, 1978-1988.	0.6	92
11	Mixing instabilities during shearing of metals. <i>Nature Communications</i> , 2017, 8, 1611.	5.8	92
12	Identifying the Cause of Rupture of Li-ion Batteries during Thermal Runaway. <i>Advanced Science</i> , 2018, 5, 1700369.	5.6	89
13	Effect of β -tricalcium phosphate particles with varying porosity on osteogenesis after sinus floor augmentation in humans. <i>Biomaterials</i> , 2008, 29, 2249-2258.	5.7	88
14	In situ investigation of the discharge of alkaline Zn-MnO ₂ batteries with synchrotron x-ray and neutron tomographies. <i>Applied Physics Letters</i> , 2007, 90, 214102.	1.5	84
15	MHz frame rate hard X-ray phase-contrast imaging using synchrotron radiation. <i>Optics Express</i> , 2017, 25, 13857.	1.7	82
16	A versatile indirect detector design for hard X-ray microimaging. <i>Journal of Instrumentation</i> , 2012, 7, P09016-P09016.	0.5	80
17	Comparative study of multilayers used in monochromators for synchrotron-based coherent hard X-ray imaging. <i>Journal of Synchrotron Radiation</i> , 2010, 17, 496-510.	1.0	73
18	Self-similar mesostructure evolution of the growing mollusc shell reminiscent of thermodynamically driven grain growth. <i>Nature Materials</i> , 2014, 13, 1102-1107.	13.3	72

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19	Microporosity in aluminium foams. <i>Acta Materialia</i> , 2017, 131, 156-168.	3.8	72
20	Why are metal foams stable?. <i>Applied Physics Letters</i> , 2006, 89, 154102.	1.5	71
21	X-ray diffraction microtomography (XRD-CT), a novel tool for non-invasive mapping of phase development in cement materials. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 397, 2131-2136.	1.9	71
22	High-resolution tomography of cracks, voids and micro-structure in greywacke and limestone. <i>Journal of Structural Geology</i> , 2008, 30, 876-887.	1.0	65
23	A deformation rig for synchrotron microtomography studies of geomaterials under conditions down to 10 km depth in the Earth. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1030-1034.	1.0	63
24	X-ray tomography investigations of mono-sized sphere packing structures in cylindrical containers. <i>Powder Technology</i> , 2017, 318, 471-483.	2.1	63
25	Early pore formation in aluminium foams studied by synchrotron-based microtomography and 3-D image analysis. <i>Acta Materialia</i> , 2009, 57, 4809-4821.	3.8	62
26	A novel epitaxially grown LSO-based thin-film scintillator for micro-imaging using hard synchrotron radiation. <i>Journal of Synchrotron Radiation</i> , 2010, 17, 571-583.	1.0	61
27	Identification of root filling interfaces by microscopy and tomography methods. <i>International Endodontic Journal</i> , 2011, 44, 395-401.	2.3	60
28	Synchrotron radiation computed laminography for high-resolution three-dimensional imaging of flat devices. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 2760-2765.	0.8	59
29	Quantitative X-ray phase-contrast computed tomography at 82 keV. <i>Optics Express</i> , 2013, 21, 4155.	1.7	59
30	Fatigue induced changes in conical implant-abutment connections. <i>Dental Materials</i> , 2015, 31, 1415-1426.	1.6	58
31	<i>In vitro</i> synchrotron-based radiography of micro-gap formation at the implant-abutment interface of two-piece dental implants. <i>Journal of Synchrotron Radiation</i> , 2010, 17, 289-294.	1.0	56
32	Supervised deep learning for real-time quality monitoring of laser welding with X-ray radiographic guidance. <i>Scientific Reports</i> , 2020, 10, 3389.	1.6	56
33	Exploiting coherence for real-time studies by single-bunch imaging. <i>Journal of Synchrotron Radiation</i> , 2014, 21, 815-818.	1.0	54
34	Fast processes in liquid metal foams investigated by high-speed synchrotron x-ray microradioscopy. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	53
35	On the possibilities of hard X-ray imaging with high spatio-temporal resolution using polychromatic synchrotron radiation. <i>Journal of X-Ray Science and Technology</i> , 2010, 18, 429-441.	0.7	53
36	Formation of intermetallic $\hat{\gamma}$ phase in Al-10Si-0.3Fe alloy investigated by in-situ 4D X-ray synchrotron tomography. <i>Acta Materialia</i> , 2017, 129, 194-202.	3.8	53

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37	Ghost tomography. <i>Optica</i> , 2018, 5, 1516.	4.8	53
38	Synchrotron-based radioscopy employing spatio-temporal micro-resolution for studying fast phenomena in liquid metal foams. <i>Journal of Synchrotron Radiation</i> , 2009, 16, 432-434.	1.0	51
39	Monoclinic phase transformations of zirconia-based dental prostheses, induced by clinically practised surface manipulations. <i>Acta Biomaterialia</i> , 2011, 7, 2994-3002.	4.1	51
40	LPE grown LSO:Tb scintillator films for high-resolution X-ray imaging applications at synchrotron light sources. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 648, S321-S323.	0.7	50
41	Initiation and growth kinetics of solidification cracking during welding of steel. <i>Scientific Reports</i> , 2017, 7, 40255.	1.6	49
42	An In Vitro Pilot Study of Abutment Stability During Loading in New and Fatigue-Loaded Conical Dental Implants Using Synchrotron-Based Radiography. <i>International Journal of Oral and Maxillofacial Implants</i> , 2013, 28, 44-50.	0.6	48
43	Laser processing quality monitoring by combining acoustic emission and machine learning: a high-speed X-ray imaging approach. <i>Procedia CIRP</i> , 2018, 74, 654-658.	1.0	47
44	Experimental comparison of grating- and propagation-based hard X-ray phase tomography of soft tissue. <i>Journal of Applied Physics</i> , 2014, 116, .	1.1	46
45	In-situ Synchrotron imaging of keyhole mode multi-layer laser powder bed fusion additive manufacturing. <i>Applied Materials Today</i> , 2020, 20, 100650.	2.3	46
46	Stabilisation of aluminium foams and films by the joint action of dispersed particles and oxide films. <i>Acta Materialia</i> , 2015, 99, 313-324.	3.8	44
47	Time and Mechanism of Nanoparticle Functionalization by Macromolecular Ligands during Pulsed Laser Ablation in Liquids. <i>Langmuir</i> , 2019, 35, 3038-3047.	1.6	44
48	Ultra high-speed x-ray imaging of laser-driven shock compression using synchrotron light. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 055601.	1.3	42
49	Megahertz x-ray microscopy at x-ray free-electron laser and synchrotron sources. <i>Optica</i> , 2019, 6, 1106.	4.8	41
50	Quantification of bone tissue regeneration employing $\hat{\Gamma}^2$ -tricalcium phosphate by three-dimensional non-invasive synchrotron micro-tomography – A comparative examination with histomorphometry. <i>Bone</i> , 2009, 44, 619-628.	1.4	40
51	Characterization of crocodile teeth: Correlation of composition, microstructure, and hardness. <i>Journal of Structural Biology</i> , 2013, 184, 155-163.	1.3	40
52	Metal Foaming Investigated by X-ray Radioscopy. <i>Metals</i> , 2012, 2, 10-21.	1.0	39
53	X-ray phase tomography with near-field speckles for three-dimensional virtual histology. <i>Optica</i> , 2020, 7, 1221.	4.8	37
54	Holotomography versus X-ray grating interferometry: A comparative study. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	36

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55	White beam synchrotron topography using a high resolution digital X-ray imaging detector. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 2035-2040.	0.6	35
56	Examining microstructural evolution of Portland cements by in-situ synchrotron micro-tomography. Journal of Materials Science, 2015, 50, 1805-1817.	1.7	33
57	Towards a practical implementation of X-ray ghost imaging with synchrotron light. IUCr, 2018, 5, 428-438.	1.0	32
58	Coarsening of grain-refined semi-solid Al-Ge ₃₂ alloy: X-ray microtomography and in situ radiography. Acta Materialia, 2007, 55, 5045-5055.	3.8	31
59	Micro- and nano-structural details of a spider's filter for substrate vibrations: relevance for low-frequency signal transmission. Journal of the Royal Society Interface, 2015, 12, 20141111.	1.5	31
60	Multi-contrast 3D X-ray imaging of porous and composite materials. Applied Physics Letters, 2015, 106, .	1.5	31
61	Evaluating scintillator performance in time-resolved hard X-ray studies at synchrotron light sources. Journal of Synchrotron Radiation, 2016, 23, 685-693.	1.0	31
62	Near-field ptychography using lateral and longitudinal shifts. New Journal of Physics, 2015, 17, 073033.	1.2	30
63	Numerical analysis of deposit effect on nozzle flow and spray characteristics of GDI injectors. Applied Energy, 2017, 204, 1215-1224.	5.1	29
64	Comparison of the statolith structures of Chironex fleckeri (Cnidaria, Cubozoa) and Periphylla periphylla (Cnidaria, Scyphozoa): a phylogenetic approach. Marine Biology, 2011, 158, 1149-1161.	0.7	28
65	Particle and liquid motion in semi-solid aluminium alloys: A quantitative in situ microradioscopy study. Acta Materialia, 2013, 61, 1244-1253.	3.8	28
66	X-Ray Phase-Contrast Tomography of Renal Ischemia-Reperfusion Damage. PLoS ONE, 2014, 9, e109562.	1.1	28
67	Beyond imaging: on the quantitative analysis of tomographic volume data. International Journal of Materials Research, 2012, 103, 217-227.	0.1	28
68	The effect of cell geometry and trigger method on the risks associated with thermal runaway of lithium-ion batteries. Journal of Power Sources, 2022, 524, 230645.	4.0	28
69	A Three-Stage Mechanistic Model for Solidification Cracking During Welding of Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1674-1682.	1.1	27
70	Why is in situ quality control of laser keyhole welding a real challenge?. Procedia CIRP, 2018, 74, 649-653.	1.0	27
71	Biom mineralization as a Paradigm of Directional Solidification: A Physical Model for Molluscan Shell Ultrastructural Morphogenesis. Advanced Materials, 2018, 30, e1803855.	11.1	27
72	Ultra-high-speed indirect x-ray imaging system with versatile spatiotemporal sampling capabilities. Applied Optics, 2018, 57, 5004.	0.9	26

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73	Real-time direct and diffraction X-ray imaging of irregular silicon wafer breakage. IUCr, 2016, 3, 108-114.	1.0	26
74	Characterization of multilayer structures in fiber reinforced polymer employing synchrotron and laboratory X-ray CT. International Journal of Materials Research, 2014, 105, 645-654.	0.1	25
75	Grating-based X-ray phase-contrast tomography of atherosclerotic plaque at high photon energies. Zeitschrift Fur Medizinische Physik, 2013, 23, 194-203.	0.6	23
76	Shaping highly regular glass architectures: A lesson from nature. Science Advances, 2017, 3, eaao2047.	4.7	23
77	Optimizing structural and mechanical properties of cryogel scaffolds for use in prostate cancer cell culturing. Materials Science and Engineering C, 2017, 71, 465-472.	3.8	23
78	Multi frame synchrotron radiography of pulsed power driven underwater single wire explosions. Journal of Applied Physics, 2018, 124, .	1.1	23
79	A scolopocryptopid centipede (Chilopoda: Scolopendromorpha) from Mexican amber: synchrotron microtomography and phylogenetic placement using a combined morphological and molecular data set. Zoological Journal of the Linnean Society, 2012, 166, 768-786.	1.0	22
80	Heat bump on a monochromator crystal measured with X-ray grating interferometry. Journal of Synchrotron Radiation, 2013, 20, 300-305.	1.0	22
81	In-situ visualization of sound-induced otolith motion using hard X-ray phase contrast imaging. Scientific Reports, 2018, 8, 3121.	1.6	22
82	Influence of impurities, strontium addition and cooling rate on microstructure evolution in Al-10Si-0.3Fe casting alloys. Journal of Alloys and Compounds, 2018, 766, 818-827.	2.8	22
83	Prevention of lithium-ion battery thermal runaway using polymer-substrate current collectors. Cell Reports Physical Science, 2021, 2, 100360.	2.8	22
84	Partial decomposition of TiH ₂ studied in situ by energy-dispersive diffraction and ex situ by diffraction microtomography of hard X-ray synchrotron radiation. Scripta Materialia, 2012, 66, 757-760.	2.6	21
85	X-ray grating interferometry at photon energies over 180 keV. Applied Physics Letters, 2015, 106, .	1.5	21
86	Probing the early stages of shock-induced chondritic meteorite formation at the mesoscale. Scientific Reports, 2017, 7, 45206.	1.6	21
87	Multichannel optrodes for photonic stimulation. Neurophotonics, 2018, 5, 1.	1.7	21
88	In situ radiographic and ex situ tomographic analysis of pore interactions during multilayer builds in laser powder bed fusion. Additive Manufacturing, 2020, 36, 101512.	1.7	20
89	Mass Density Measurement of Mineralized Tissue with Grating-Based X-Ray Phase Tomography. PLoS ONE, 2016, 11, e0167797.	1.1	20
90	Direct observation of particle flow in semi-solid alloys by synchrotron X-ray micro-radioscopy. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 718-723.	0.8	19

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91	Micropowder injection molding: investigation of powder-binder separation using synchrotron-based microtomography and 3D image analysis. <i>Journal of Materials Science</i> , 2011, 46, 3568-3573.	1.7	19
92	Analyses of the mouthpart kinematics in <i>Periplaneta americana</i> (Blattodea, Blattidae) by using Synchrotron-based X-ray cineradiography. <i>Journal of Experimental Biology</i> , 2014, 217, 3095-107.	0.8	19
93	X-ray phase-contrast tomosynthesis for improved breast tissue discrimination. <i>European Journal of Radiology</i> , 2014, 83, 531-536.	1.2	19
94	Application of high resolution synchrotron micro-CT radiation in dental implant osseointegration. <i>Journal of Cranio-Maxillo-Facial Surgery</i> , 2015, 43, 682-687.	0.7	19
95	X-ray radiography of the overheating instability in underwater electrical explosions of wires. <i>Physics of Plasmas</i> , 2019, 26, .	0.7	19
96	Collapse dynamics of spherical cavities in a solid under shock loading. <i>Scientific Reports</i> , 2020, 10, 8455.	1.6	19
97	X-ray phase-contrast ghost imaging using a single-pixel camera. <i>Optica</i> , 2021, 8, 1538.	4.8	19
98	Advances in indirect detector systems for ultra high-speed hard X-ray imaging with synchrotron light. <i>Journal of Instrumentation</i> , 2018, 13, C04004-C04004.	0.5	18
99	New insights into the process of osteogenesis of anosteocytic bone. <i>Bone</i> , 2019, 125, 61-73.	1.4	18
100	Multiscale characterization of the nucleation and 3D structure of Al ₃ Sc phases using electron microscopy and synchrotron X-ray tomography. <i>Materials Characterization</i> , 2020, 164, 110353.	1.9	18
101	<i>In situ</i> microradioscopy and microtomography of fatigue-loaded dental two-piece implants. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 1492-1497.	1.0	17
102	Analysis of spatial cross-correlations in multi-constituent volume data. <i>Journal of Microscopy</i> , 2008, 232, 282-292.	0.8	16
103	The impact of surface morphology on the magnetovolume transition in magnetocaloric LaFe _{11.8} Si _{1.2} . <i>APL Materials</i> , 2016, 4, 106101.	2.2	16
104	High-Speed X-ray Cineradiography for Analyzing Complex Kinematics in Living Insects. <i>Synchrotron Radiation News</i> , 2008, 21, 34-38.	0.2	15
105	Mapping the dislocation sub-structure of deformed polycrystalline Ni by scanning microbeam diffraction topography. <i>Scripta Materialia</i> , 2011, 64, 884-887.	2.6	15
106	Fatigue induced deformation of taper connections in dental titanium implants. <i>International Journal of Materials Research</i> , 2012, 103, 207-216.	0.1	15
107	High-speed in-situ tomography of liquid protein foams. <i>International Journal of Materials Research</i> , 2014, 105, 632-639.	0.1	15
108	Synchrotron based X-ray radiography of convergent shock waves driven by underwater electrical explosion of a cylindrical wire array. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	15

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109	3d tomography analysis of the packing structure of spherical particles in slender prismatic containers. <i>International Journal of Materials Research</i> , 2020, 111, 65-77.	0.1	15
110	Hard X-ray phase-contrast tomography of non-homogeneous specimens: grating interferometry versus propagation-based imaging. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1202-1209.	1.0	14
111	Quantitative correlation between the void morphology of niobium-tin wires and their irreversible critical current degradation upon mechanical loading. <i>Scientific Reports</i> , 2018, 8, 6589.	1.6	14
112	Use of synchrotron-based radiography to diagnose pulsed power driven wire explosion experiments. <i>Review of Scientific Instruments</i> , 2019, 90, 013504.	0.6	14
113	Estimation of the probability of finite percolation in porous microstructures from tomographic images. <i>International Journal of Materials Research</i> , 2012, 103, 184-191.	0.1	14
114	Real-time X-ray diffraction imaging for semiconductor wafer metrology and high temperature in situ experiments. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 2499-2504.	0.8	13
115	Numerical comparison of X-ray differential phase contrast and attenuation contrast. <i>Biomedical Optics Express</i> , 2012, 3, 1141.	1.5	13
116	Investigation of the luminescence, crystallographic and spatial resolution properties of LSO:Tb scintillating layers used for X-ray imaging applications. <i>Radiation Measurements</i> , 2014, 62, 28-34.	0.7	13
117	In situ 3D X-ray microtomography of laser-based powder-bed fusion (L-PBF) – A feasibility study. <i>Additive Manufacturing</i> , 2020, 34, 101271.	1.7	13
118	Dynamical bistability in quantum-dot structures: Role of Auger processes. <i>Physical Review B</i> , 2002, 66, .	1.1	12
119	White beam topography of 300 Å Si wafers. <i>Journal of Materials Science: Materials in Electronics</i> , 2008, 19, 269-272.	1.1	12
120	Studies of LSO:Tb radio-luminescence properties using white beam hard X-ray synchrotron irradiation. <i>Radiation Effects and Defects in Solids</i> , 2009, 164, 517-522.	0.4	12
121	Ultra-precision fabrication of 500 mm long and laterally graded Ru/C multilayer mirrors for X-ray light sources. <i>Review of Scientific Instruments</i> , 2016, 87, 051804.	0.6	12
122	Gaps at the interface between dentine and self-adhesive resin cement in post-endodontic restorations quantified in 3D by phase contrast-enhanced micro-CT. <i>International Endodontic Journal</i> , 2020, 53, 392-402.	2.3	12
123	New frontiers in extreme conditions science at synchrotrons and free electron lasers. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 274003.	0.7	12
124	Machine learning applied to X-ray tomography as a new tool to analyze the voids in RRP Nb ₃ Sn wires. <i>Scientific Reports</i> , 2021, 11, 7767.	1.6	11
125	Helical Microstructures of the Mineralized Coralline Red Algae Determine Their Mechanical Properties. <i>Advanced Science</i> , 2020, 7, 2000108.	5.6	11
126	Thermal Runaway of Li-Ion Cells: How Internal Dynamics, Mass Ejection, and Heat Vary with Cell Geometry and Abuse Type. <i>Journal of the Electrochemical Society</i> , 2022, 169, 020526.	1.3	11

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127	Quantitative studies on inner interfaces in conical metal joints using hard x-ray inline phase contrast radiography. Review of Scientific Instruments, 2010, 81, 103703.	0.6	10
128	Coating thickness determination in highly absorbent core-shell systems. Journal of Applied Crystallography, 2012, 45, 906-913.	1.9	10
129	X-ray-refractive-index measurements at photon energies above 100 keV with a grating interferometer. Physical Review A, 2015, 91, .	1.0	10
130	In-situ radiography of a split-Hopkinson bar dynamically loaded materials. Journal of Instrumentation, 2019, 14, T06008-T06008.	0.5	10
131	Simultaneous X-ray radiography and diffraction topography imaging applied to silicon for defect analysis during melting and crystallization. Journal of Applied Crystallography, 2019, 52, 1312-1320.	1.9	10
132	Hard X-ray Imaging at ESRF: Exploiting Contrast and Coherence with the New EBS Storage Ring. Synchrotron Radiation News, 2020, 33, 20-28.	0.2	10
133	Boosting spatial resolution by incorporating periodic boundary conditions into single-distance hard-x-ray phase retrieval. Journal of Optics (United Kingdom), 2020, 22, 115607.	1.0	10
134	Hierarchical radioscopy using polychromatic and partially coherent hard synchrotron radiation. Applied Optics, 2013, 52, 8122.	0.9	9
135	In situ X-ray tomography of aqueous foams: Analysis of columnar foam generation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 534, 78-84.	2.3	9
136	Peculiarities of planar shockwave interaction with air-water interface and solid target. Physics of Plasmas, 2022, 29, .	0.7	9
137	Hard X-ray multilayer mirror round-robin on the wavefront preservation capabilities of W/B4C coatings. Radiation Physics and Chemistry, 2012, 81, 1696-1702.	1.4	8
138	The rupture of a single liquid aluminium alloy film. Soft Matter, 2014, 10, 4711.	1.2	8
139	Synchrotron radiation μ CT and histology evaluation of bone-to-implant contact. Journal of Cranio-Maxillo-Facial Surgery, 2017, 45, 1448-1457.	0.7	8
140	Synchrotron-based micro computed tomography investigation of the implant-abutment fatigue-induced microgap changes. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 116, 104330.	1.5	8
141	The high-resolution synchrotron-based imaging stations at the BAM line (BESSY) and TopoTomo (ANKA)., 2008, , .		7
142	Performance of Multilayer Monochromators for Hard X-Ray Imaging with Coherent Synchrotron Radiation. AIP Conference Proceedings, 2011, , .	0.3	7
143	Coherence preservation and beam flatness of a single-bounce multilayer monochromator (beamline) Tj ETQq1 1 0.784314 rgBT /Over Spectrometers, Detectors and Associated Equipment, 2011, 649, 123-127.	0.7	7
144	Protocol to study wavefront preservation capabilities of reflective X-ray optics with coherent synchrotron light. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 710, 101-105.	0.7	7

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145	In situ demineralisation of human enamel studied by synchrotron-based X-ray microtomography – A descriptive pilot-study. <i>Micron</i> , 2013, 44, 404-409.	1.1	7
146	Torsion estimation of particle paths through porous media observed by <i>in situ</i> time-resolved microtomography. <i>Journal of Microscopy</i> , 2017, 266, 141-152.	0.8	7
147	Validation of finite-element simulations with synchrotron radiography – A descriptive study of micromechanics in two-piece dental implants. <i>Heliyon</i> , 2018, 4, e00524.	1.4	7
148	Foams of Gray Cast Iron as Efficient Energy Absorption Structures: A Feasibility Study. <i>Advanced Engineering Materials</i> , 2019, 21, 1900080.	1.6	7
149	X-ray Based in Situ Investigation of Silicon Growth Mechanism Dynamics – Application to Grain and Defect Formation. <i>Crystals</i> , 2020, 10, 555.	1.0	7
150	Movement analysis of primate molar teeth under load using synchrotron X-ray microtomography. <i>Journal of Structural Biology</i> , 2021, 213, 107658.	1.3	7
151	In-situ visualisation of dynamic fracture and fragmentation of an L-type ordinary chondrite by combined synchrotron X-ray radiography and microtomography. <i>Icarus</i> , 2021, 359, 114346.	1.1	7
152	A Comparative Study of the Biodegradability of Calcium-Alkali-Orthophosphate Ceramics in Vitro and in Vivo. <i>Key Engineering Materials</i> , 2007, 330-332, 63-66.	0.4	6
153	Synchrotron micro-CT for studying coarsening in milk protein-stabilized foams in situ. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2020, 601, 124832.	2.3	6
154	Study of multilayer-reflected beam profiles and their coherence properties using beamlines ID19 (ESRF) and 32-ID (APS). , 2012, , .		5
155	Finding robust descriptive features for the characterization of the coarsening dynamics of three dimensional whey protein foams. <i>Journal of Colloid and Interface Science</i> , 2016, 467, 148-157.	5.0	5
156	Synchrotron Microtomography Investigation of the Filament Microstructure in Differently Processed Bi-2212 Wires. <i>IEEE Transactions on Applied Superconductivity</i> , 2017, 27, 1-5.	1.1	5
157	Coalescence Avalanches in Liquid Aluminum Foams. <i>Metals</i> , 2017, 7, 298.	1.0	5
158	Combining Coherent Hard X-Ray Tomographies with Phase Retrieval to Generate Three-Dimensional Models of Forming Bone. <i>Frontiers in Materials</i> , 2017, 4, .	1.2	5
159	Hard X-ray phase-contrast-enhanced micro-CT for quantifying interfaces within brittle dense root-filling-restored human teeth. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 1015-1022.	1.0	5
160	The synchrotron-based imaging station for micro-radiography and-tomography at the BAMline (BESSY). <i>Journal of Physics: Conference Series</i> , 2009, 186, 012047.	0.3	4
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