Marco Stampanoni

List of Publications by Year
in descending order

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399 papers	16,819 citations	16451 64 h-index	23533 111 g-index
405 all docs	405 docs citations	405 times ranked	14538 citing authors

#	Article	IF	Citations
1	X-ray phase imaging with a grating interferometer. Optics Express, 2005, 13, 6296.	3.4	1,135
2	Visualization and Quantification of Electrochemical and Mechanical Degradation in Li Ion Batteries. Science, 2013, 342, 716-720.	12.6	571
3	Stripe and ring artifact removal with combined waveletâ€”Fourier filtering. Optics Express, 2009, 17, 8567.	3.4	514
4	Real-time 3D imaging of Haines jumps in porous media flow. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3755-3759.	7.1	490
5	Regridding reconstruction algorithm for real-time tomographic imaging. Journal of Synchrotron Radiation, 2012, 19, 1029-1037.	2.4	362
6	3D experimental investigation of the microstructure of cement pastes using synchrotron X-ray microtomography (Î¼CT). Cement and Concrete Research, 2007, 37, 360-368.	11.0	300
7	Synchrotron X-ray tomographic microscopy of fossil embryos. Nature, 2006, 442, 680-683.	27.8	279
8	The First Analysis and Clinical Evaluation of Native Breast Tissue Using Differential Phase-Contrast Mammography. Investigative Radiology, 2011, 46, 801-806.	6.2	228
9	Xâ€Ray Tomography of Porous, Transition Metal Oxide Based Lithium Ion Battery Electrodes. Advanced Energy Materials, 2013, 3, 845-850.	19.5	215
10	Low-dose, simple, and fast grating-based X-ray phase-contrast imaging. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13576-13581.	7.1	208
11	Simulation comparison of wake mitigation control strategies for a two-turbine case. Wind Energy, 2015, 18, 2135-2143.	4.2	206
12	Trends in synchrotron-based tomographic imaging: the SLS experience. , 2006, , .		196
13	Cellular and Subcellular Structure of Neoproterozoic Animal Embryos. Science, 2006, 314, 291-294.	12.6	190
14	Imaging and image processing in porous media research. Advances in Water Resources, 2008, 31, 1174-1187.	3.8	183
15	Off-the-shelf human decellularized tissue-engineered heart valves in a non-human primate model. Biomaterials, 2013, 34, 7269-7280.	11.4	173
16	Phase-contrast X-ray microtomography links Cretaceous seeds with Gnetales and Bennettitales. Nature, 2007, 450, 549-552.	27.8	172
17	Ultrastructural Properties in Cortical Bone Vary Greatly in Two Inbred Strains of Mice as Assessed by Synchrotron Light Based Micro- and Nano-CT. Journal of Bone and Mineral Research, 2007, 22, 1557-1570.	2.8	166
18	Vascular Graph Model to Simulate the Cerebral Blood Flow in Realistic Vascular Networks. Journal of Cerebral Blood Flow and Metabolism, 2009, 29, 1429-1443.	4.3	166

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19	Determination of Material Properties of Gas Diffusion Layers: Experiments and Simulations Using Phase Contrast Tomographic Microscopy. Journal of the Electrochemical Society, 2009, 156, B1175.	2.9	163
20	Hierarchical microimaging for multiscale analysis of large vascular networks. NeuroImage, 2006, 32, 626-636.	4.2	161
21	Implementation of a fast method for high resolution phase contrast tomography. Optics Express, 2006, 14, 8103.	3.4	157
22	Developmental alveolarization of the mouse lung. Developmental Dynamics, 2008, 237, 2108-2116.	1.8	145
23	Evidence and structural mechanism for late lung alveolarization. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2008, 294, L246-L254.	2.9	144
24	Fossilized Nuclei and Germination Structures Identify Ediacaran â€œAnimal Embryosâ€•as Encysting Protists. Science, 2011, 334, 1696-1699.	12.6	142
25	GigaFRoST: the gigabit fast readout system for tomography. Journal of Synchrotron Radiation, 2017, 24, 1250-1259.	2.4	139
26	In Vivo Time-Resolved Microtomography Reveals the Mechanics of the Blowfly Flight Motor. PLoS Biology, 2014, 12, e1001823.	5.6	134
27	Investigation of liquid water in gas diffusion layers of polymer electrolyte fuel cells using X-ray tomographic microscopy. Electrochimica Acta, 2011, 56, 2254-2262.	5.2	132
28	Progress in In Situ X-Ray Tomographic Microscopy of Liquid Water in Gas Diffusion Layers of PEFC. Journal of the Electrochemical Society, 2011, 158, B963-B970.	2.9	130
29	High resolution X-ray detector for synchrotron-based microtomography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 491, 291-301.	1.6	125
30	Development and trends in synchrotron studies of ancient and historical materials. Physics Reports, 2012, 519, 51-96.	25.6	125
31	Dietary specializations and diversity in feeding ecology of the earliest stem mammals. Nature, 2014, 512, 303-305.	27.8	125
32	Embryo fossilization is a biological process mediated by microbial biofilms. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19360-19365.	7.1	119
33	Phase-contrast tomography at the nanoscale using hard x rays. Physical Review B, 2010, 81, .	3.2	115
34	Time-lapsed investigation of three-dimensional failure and damage accumulation in trabecular bone using synchrotron light. Bone, 2006, 39, 289-299.	2.9	112
35	Fossil jawless fish from China foreshadows early jawed vertebrate anatomy. Nature, 2011, 476, 324-327.	27.8	112
36	Non-invasive classification of microcalcifications with phase-contrast X-ray mammography. Nature Communications, 2014, 5, 3797.	12.8	110

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37	3D imaging of microstructure of spruce wood. Journal of Structural Biology, 2007, 159, 46-55.	2.8	109
38	Quantifying microstructural dynamics and electrochemical activity of graphite and silicon-graphite lithium ion battery anodes. Nature Communications, 2016, 7, 12909.	12.8	109
39	Advanced phase-contrast imaging using a grating interferometer. Journal of Synchrotron Radiation, 2009, 16, 562-572.	2.4	102
40	Development of teeth and jaws in the earliest jawed vertebrates. Nature, 2012, 491, 748-751.	27.8	98
41	A quantitative framework for the 3D characterization of the osteocyte lacunar system. Bone, 2013, 57, 142-154.	2.9	95
42	In situ synchrotron X-ray micro-tomography study of pitting corrosion in stainless steel. Corrosion Science, 2011, 53, 2684-2687.	6.6	94
43	Fungus-like mycelial fossils in 2.4-billion-year-old vesicular basalt. Nature Ecology and Evolution, 2017, 1, 141.	7.8	94
44	Using X-ray tomoscopy to explore the dynamics of foaming metal. Nature Communications, 2019, 10, 3762.	12.8	94
45	Dynamic Operation of HT-PEFC: In-Operando Imaging of Phosphoric Acid Profiles and (Re)distribution. Journal of the Electrochemical Society, 2015, 162, F310-F316.	2.9	92
46	Finite element 3D reconstruction of the pulmonary acinus imaged by synchrotron X-ray tomography. Journal of Applied Physiology, 2008, 105, 964-976.	2.5	86
47	Scientific data exchange: a schema for HDF5-based storage of raw and analyzed data. Journal of Synchrotron Radiation, 2014, 21, 1224-1230.	2.4	86
48	Synchrotron X-ray radiography studies of pitting corrosion of stainless steel: Extraction of pit propagation parameters. Corrosion Science, 2015, 100, 23-35.	6.6	83
49	The materials science beamline at the Swiss Light Source: design and realization. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 540, 42-67.	1.6	81
50	X-ray microtomography studies of localised corrosion and transitions to stress corrosion cracking. Materials Science and Technology, 2006, 22, 1076-1085.	1.6	81
51	TOMCAT: A beamline for TOmographic Microscopy and Coherent rAdiology experimenTs. AIP Conference Proceedings, 2007, , .	0.4	79
52	The origin of conodonts and of vertebrate mineralized skeletons. Nature, 2013, 502, 546-549.	27.8	79
53	Time-lapsed assessment of microcrack initiation and propagation in murine cortical bone at submicrometer resolution. Bone, 2009, 45, 164-173.	2.9	78
54	Towards on-the-fly data post-processing for real-time tomographic imaging at TOMCAT. Advanced Structural and Chemical Imaging, 2017, 3, 1.	4.0	78

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55	Angiotensin II infusion into ApoE-/- mice: a model for aortic dissection rather than abdominal aortic aneurysm?. Cardiovascular Research, 2017, 113, 1230-1242.	3.8	78
56	Prenatally engineered autologous amniotic fluid stem cell-based heart valves in the fetal circulation. Biomaterials, 2012, 33, 4031-4043.	11.4	76
57	A multiple source model for 6 MV photon beam dose calculations using Monte Carlo. Physics in Medicine and Biology, 2001, 46, 1407-1427.	3.0	75
58	Operando Properties of Gas Diffusion Layers: Saturation and Liquid Permeability. Journal of the Electrochemical Society, 2017, 164, F115-F126.	2.9	75
59	Imaging brain amyloid deposition using grating-based differential phase contrast tomography. NeuroImage, 2012, 61, 1336-1346.	4.2	74
60	Dynamic intensity normalization using eigen flat fields in X-ray imaging. Optics Express, 2015, 23, 27975.	3.4	74
61	Local Strain Distribution in Real Three-Dimensional Alveolar Geometries. Annals of Biomedical Engineering, 2011, 39, 2835-2843.	2.5	71
62	Sensitivity of X-ray grating interferometry. Optics Express, 2011, 19, 18324.	3.4	70
63	Novel three-dimensional analysis tool for vascular trees indicates complete micro-networks, not single capillaries, as the angiogenic endpoint in mice overexpressing human VEGF165 in the brain. NeuroImage, 2008, 39, 1549-1558.	4.2	69
64	Development of a laser-based heating system forinÂsitusynchrotron-based X-ray tomographic microscopy. Journal of Synchrotron Radiation, 2012, 19, 352-358.	2.4	67
65	Characterization of Liquid Water Saturation in Gas Diffusion Layers by X-Ray Tomographic Microscopy. Journal of the Electrochemical Society, 2016, 163, F202-F209.	2.9	67
66	Embryos, polyps and medusae of the Early Cambrian scyphozoan Olivooides. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20130071.	2.6	66
67	Fossilized fungi in subseafloor Eocene basalts. Geology, 2012, 40, 163-166.	4.4	65
68	Ascending Aortic Aneurysm in Angiotensin IIâ€“Infused Mice. Arteriosclerosis, Thrombosis, and Vascular Biology, 2016, 36, 673-681.	2.4	65
69	Potomacanthus lobatus gen. et sp. nov., a new flower of probable Lauraceae from the Early Cretaceous (Early to Middle Albian) of eastern North America. American Journal of Botany, 2007, 94, 2041-2053.	1.7	64
70	Synchrotron X-Ray Microtomography Study of the Role of Y in Corrosion of Magnesium Alloy WE43. Electrochemical and Solid-State Letters, 2007, 10, C5.	2.2	63
71	Phase contrast tomography: An alternative approach. Applied Physics Letters, 2006, 88, 214104.	3.3	62
72	Deepâ€biosphere consortium of fungi and prokaryotes in Eocene subseafloor basalts. Geobiology, 2014, 12, 489-496.	2.4	62

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73	Imaging the Ultrasmall-Angle X-Ray Scattering Distribution with Grating Interferometry. Physical Review Letters, 2012, 108, 048101.	7.8	60
74	Virtual taphonomy using synchrotron tomographic microscopy reveals cryptic features and internal structure of modern and fossil plants. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 12013-12018.	7.1	59
75	Dose optimization approach to fast X-ray microtomography of the lung alveoli. Journal of Applied Crystallography, 2013, 46, 856-860.	4.5	59
76	Dissecting abdominal aortic aneurysm in Ang II-infused mice: suprarenal branch ruptures and apparent luminal dilatation. Cardiovascular Research, 2015, 105, 213-222.	3.8	59
77	Simultaneous 3D visualization and quantification of murine bone and bone vasculature using microâ€computed tomography and vascular replica. Microscopy Research and Technique, 2009, 72, 690-701.	2.2	58
78	A Study on Mastectomy Samples to Evaluate Breast Imaging Quality and Potential Clinical Relevance of Differential Phase Contrast Mammography. Investigative Radiology, 2014, 49, 131-137.	6.2	57
79	Image processing pipeline for synchrotron-radiation-based tomographic microscopy. Journal of Synchrotron Radiation, 2010, 17, 550-559.	2.4	53
80	The anatomy, taphonomy, taxonomy and systematic affinity of Markuelia: Early Cambrian to Early Ordovician scalidophorans. Palaeontology, 2010, 53, 1291-1314.	2.2	53
81	Micrometer-resolution imaging using MÃ–NCH: towards G₂-less grating interferometry. Journal of Synchrotron Radiation, 2016, 23, 1462-1473.	2.4	53
82	Fossilized iron bacteria reveal a pathway to the biological origin of banded iron formation. Nature Communications, 2013, 4, 2050.	12.8	52
83	Fungus, not comet or catastrophe, accounts for carbonaceous spherules in the Younger Dryas â€œimpact layerâ€• Geophysical Research Letters, 2010, 37, .	4.0	51
84	3D-characterization of three-phase systems using X-ray tomography: tracking the microstructural evolution in ice cream. Soft Matter, 2012, 8, 4584.	2.7	51
85	Four-dimensional in vivo X-ray microscopy with projection-guided gating. Scientific Reports, 2015, 5, 8727.	3.3	51
86	Beam-shaping condenser lenses for full-field transmission X-ray microscopy. Journal of Synchrotron Radiation, 2008, 15, 106-108.	2.4	50
87	Three-dimensional visualization of fossil flowers, fruits, seeds, and other plant remains using synchrotron radiation X-ray tomographic microscopy (SRXTM): new insights into Cretaceous plant diversity. Journal of Paleontology, 2014, 88, 684-701.	0.8	50
88	Metal assisted chemical etching of silicon in the gas phase: a nanofabrication platform for X-ray optics. Nanoscale Horizons, 2020, 5, 869-879.	8.0	50
89	High-numerical-aperture macroscope optics for time-resolved experiments. Journal of Synchrotron Radiation, 2019, 26, 1161-1172.	2.4	50
90	Non-linear regularized phase retrieval for unidirectional X-ray differential phase contrast radiography. Optics Express, 2011, 19, 25545.	3.4	49

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91	Direct depiction of bone microstructure using MRI with zero echo time. Bone, 2013, 54, 44-47.	2.9	49
92	Fast reconstruction algorithm dealing with tomography artifacts. Proceedings of SPIE, 2010, , .	0.8	48
93	Determination of Liquid Water Distribution in Porous Transport Layers. ECS Transactions, 2008, 16, 587-592.	0.5	47
94	Osteocyte lacunar properties in rat cortical bone: Differences between lamellar and central bone. Journal of Structural Biology, 2015, 191, 59-67.	2.8	47
95	Natural gas hydrate investigations by synchrotron radiation Xâ€ray cryoâ€tomographic microscopy (SRXCTM). Geophysical Research Letters, 2008, 35, .	4.0	46
96	Pitting corrosion of stainless steel: measuring and modelling pit propagation in support of damage prediction for radioactive waste containers. Corrosion Engineering Science and Technology, 2011, 46, 205-211.	1.4	46
97	Dual phase grating interferometer for tunable dark-field sensitivity. Applied Physics Letters, 2017, 110, .	3.3	46
98	Experimental taphonomy of giant sulphur bacteria: implications for the interpretation of the embryo-like Ediacaran Doushantuo fossils. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 1857-1864.	2.6	45
99	Operando X-ray Tomographic Microscopy Imaging of HT-PEFC: A Comparative Study of Phosphoric Acid Electrolyte Migration. Journal of the Electrochemical Society, 2016, 163, F842-F847.	2.9	45
100	2D-Omnidirectional Hard-X-Ray Scattering Sensitivity in a Single Shot. Physical Review Letters, 2016, 116, 093902.	7.8	45
101	A comparative study of X-ray tomographic microscopyÂon shales at different synchrotron facilities: ALS, APS and SLS. Journal of Synchrotron Radiation, 2013, 20, 172-180.	2.4	44
102	Advantages of phase retrieval for fast x-ray tomographic microscopy. Journal Physics D: Applied Physics, 2013, 46, 494004.	2.8	44
103	X-ray phase-contrast imaging at 100â€…keV on a conventional source. Scientific Reports, 2015, 4, 5198.	3.3	44
104	High resolution, large field of view x-ray differential phase contrast imaging on a compact setup. Applied Physics Letters, 2011, 99, .	3.3	43
105	Distinguishing geology from biology in the Ediacaran Doushantuo biota relaxes constraints on the timing of the origin of bilaterians. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 2369-2376.	2.6	43
106	Comparison of two x-ray phase-contrast imaging methods with a microfocus source. Optics Express, 2013, 21, 30183.	3.4	43
107	Towards clinical grating-interferometry mammography. European Radiology, 2020, 30, 1419-1425.	4.5	43
108	A new partial temporal bone of a juvenile hominin from the site ofÂKromdraai B (South Africa). Journal of Human Evolution, 2013, 65, 447-456.	2.6	42

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109	Brachiopod punctae: A complexity in shell biomineralisation. Journal of Structural Biology, 2009, 167, 62-67.	2.8	41
110	The importance of murine cortical bone microstructure for microcrack initiation and propagation. Bone, 2011, 49, 1186-1193.	2.9	41
111	Performance and optimization of X-ray grating interferometry. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130027.	3.4	41
112	Fast Xâ€ray Tomographic Microscopy: Investigating Mechanisms of Performance Drop during Freeze Starts of Polymer Electrolyte Fuel Cells. ChemElectroChem, 2015, 2, 1551-1559.	3.4	41
113	Radiation dose optimized lateral expansion of theÂfield of view in synchrotron radiation X-ray tomographic microscopy. Journal of Synchrotron Radiation, 2010, 17, 590-599.	2.4	40
114	Complex Congenital Heart Disease Associated With Disordered Myocardial Architecture in a Midtrimester Human Fetus. Circulation: Cardiovascular Imaging, 2018, 11, e007753.	2.6	40
115	X-ray Fourier ptychography. Science Advances, 2019, 5, eaav0282.	10.3	40
116	In situ tomographic investigation on the early hydration behaviors of cementing systems. Construction and Building Materials, 2012, 29, 284-290.	7.2	39
117	Human hand radiography using X-ray differential phase contrast combined with dark-field imaging. Skeletal Radiology, 2013, 42, 827-835.	2.0	39
118	Towards sub-micrometer high aspect ratio X-ray gratings by atomic layer deposition of iridium. Microelectronic Engineering, 2018, 192, 19-24.	2.4	39
119	Universality and self-similarity in pinch-off of rods by bulk diffusion. Nature Physics, 2010, 6, 796-800.	16.7	38
120	A sensitive x-ray phase contrast technique for rapid imaging using a single phase grid analyzer. Optics Letters, 2013, 38, 4605.	3.3	38
121	Implications of polymer electrolyte fuel cell exposure to synchrotron radiation on gas diffusion layer water distribution. Journal of Power Sources, 2014, 245, 796-800.	7.8	38
122	Application areas of synchrotron radiation tomographic microscopy for wood research. Wood Science and Technology, 2010, 44, 67-84.	3.2	37
123	Self-assembly nanostructured gold for high aspect ratio silicon microstructures by metal assisted chemical etching. RSC Advances, 2016, 6, 16025-16029.	3.6	37
124	Bragg magnifier: A detector for submicrometer x-ray computer tomography. Journal of Applied Physics, 2002, 92, 7630-7635.	2.5	36
125	Pore space analysis of beech wood: The vessel network. Holzforschung, 2010, 64, .	1.9	36
126	Fast iterative reconstruction of differential phase contrast X-ray tomograms. Optics Express, 2013, 21, 5511.	3.4	36

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127	Visualization and stereological characterization of individual rat lung acini by high-resolution X-ray tomographic microscopy. Journal of Applied Physiology, 2013, 115, 1379-1387.	2.5	36
128	Diffractive small angle X-ray scattering imaging for anisotropic structures. Nature Communications, 2019, 10, 5130.	12.8	36
129	Towards the Fabrication of High-Aspect-Ratio Silicon Gratings by Deep Reactive Ion Etching. Micromachines, 2020, 11, 864.	2.9	36
130	Microfabrication of X-ray Optics by Metal Assisted Chemical Etching: A Review. Micromachines, 2020, 11, 589.	2.9	36
131	Real Time Tomography at the Swiss Light Source. AIP Conference Proceedings, 2010, , .	0.4	35
132	Damage evolution in wood: synchrotron radiation micro-computed tomography (SRÎ¼CT) as a complementary tool for interpreting acoustic emission (AE) behavior. Holzforschung, 2015, 69, 1015-1025.	1.9	35
133	Exceptional preservation of tiny embryos documents seed dormancy in early angiosperms. Nature, 2015, 528, 551-554.	27.8	35
134	Effect of isopropanol on gold assisted chemical etching of silicon microstructures. Microelectronic Engineering, 2017, 177, 59-65.	2.4	35
135	High sensitivity X-ray phase contrast imaging by laboratory grating-based interferometry at high Talbot order geometry. Optics Express, 2021, 29, 2049.	3.4	35
136	Investigation of discrete imaging models and iterative image reconstruction in differential X-ray phase-contrast tomography. Optics Express, 2012, 20, 10724.	3.4	34
137	A multi-purpose imaging endstation for high-resolution micrometer-scaled sub-second tomography. Physica Medica, 2016, 32, 1771-1778.	0.7	34
138	Fabrication of Au gratings by seedless electroplating for X-ray grating interferometry. Materials Science in Semiconductor Processing, 2019, 92, 73-79.	4.0	34
139	Hard X-ray phase imaging and tomography using a grating interferometer. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 626-630.	2.9	33
140	The total number of acini remains constant throughout postnatal rat lung development. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2016, 311, L1082-L1089.	2.9	33
141	A subcutaneous cellular implant for passive immunization against amyloid-Î² reduces brain amyloid and tau pathologies. Brain, 2016, 139, 1587-1604.	7.6	33
142	Determining the uncertainty in microstructural parameters extracted from tomographic data. Sustainable Energy and Fuels, 2018, 2, 598-605.	4.9	33
143	Comprehensive Analysis of Animal Models of Cardiovascular Disease using Multiscale X-Ray Phase Contrast Tomography. Scientific Reports, 2019, 9, 6996.	3.3	33
144	High-throughput full-automatic synchrotron-based tomographic microscopy. Journal of Synchrotron Radiation, 2011, 18, 117-124.	2.4	32

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145	Halo suppression in full-field x-ray Zernike phase contrast microscopy. Optics Letters, 2014, 39, 1601.	3.3	32
146	Highâ€Aspectâ€Ratio Grating Microfabrication by Platinumâ€Assisted Chemical Etching and Gold Electroplating. Advanced Engineering Materials, 2020, 22, 2000258.	3.5	32
147	Tomoscopy: Timeâ€Resolved Tomography for Dynamic Processes in Materials. Advanced Materials, 2021, 33, e2104659.	21.0	32
148	The microXAS beamline at the swiss light source: Towards nano-scale imaging. Journal of Physics: Conference Series, 2009, 186, 012003.	0.4	31
149	Synchrotron-based tomographic microscopy (SbTM) of wood: development of a testing device and observation of plastic deformation of uniaxially compressed Norway spruce samples. Holzforschung, 2012, 66, 973-979.	1.9	31
150	Quantitative 3D characterization of cellular materials: Segmentation and morphology of foam. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 415, 230-238.	4.7	31
151	NRStitcher: non-rigid stitching of terapixel-scale volumetric images. Bioinformatics, 2019, 35, 5290-5297.	4.1	31
152	Nanotomography based on double asymmetrical Bragg diffraction. Applied Physics Letters, 2003, 82, 2922-2924.	3.3	30
153	Elucidating the affinities and habitat of ancient, widespread Cyperaceae: Volkeria messelensis gen. et sp. nov., a fossil mapanioid sedge from the Eocene of Europe. American Journal of Botany, 2009, 96, 1506-1518.	1.7	29
154	Following Dynamic Processes by X-ray Tomographic Microscopy with Sub-second Temporal Resolution. AIP Conference Proceedings, 2011, , .	0.4	29
155	Microstructure characteristics during hydrate formation and dissociation revealed by X-ray tomographic microscopy. Geo-Marine Letters, 2012, 32, 555-562.	1.1	29
156	The importance of the intracortical canal network for murine bone mechanics. Bone, 2013, 53, 120-128.	2.9	29
157	Hard x-ray multi-projection imaging for single-shot approaches. Optica, 2018, 5, 1521.	9.3	29
158	Direct e-beam writing of high aspect ratio nanostructures in PMMA: A tool for diffractive X-ray optics fabrication. Microelectronic Engineering, 2010, 87, 1052-1056.	2.4	28
159	Pinch-off of rods by bulk diffusion. Acta Materialia, 2011, 59, 4922-4932.	7.9	28
160	Signal-to-noise criterion for free-propagation imaging techniques at free-electron lasers and synchrotrons. Optics Express, 2016, 24, 3189.	3.4	28
161	Tomographic in vivo microscopy for the study of lung physiology at the alveolar level. Scientific Reports, 2017, 7, 12545.	3.3	28
162	Deciphering the fossil record of early bilaterian embryonic development in light of experimental taphonomy. Evolution & Development, 2008, 10, 339-349.	2.0	27

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163	Visualization of respiratory flows from 3D reconstructed alveolar airspaces using X-ray tomographic microscopy. Journal of Visualization, 2010, 13, 337-345.	1.8	27
164	Efficient estimation of the total number of acini in adult rat lung. Physiological Reports, 2014, 2, e12063.	1.7	27
165	Micron resolution of MÃ–NCH and GOTTHARD, small pitch charge integrating detectors with single photon sensitivity. Journal of Instrumentation, 2014, 9, C05027-C05027.	1.2	27
166	A generalized quantitative interpretation of dark-field contrast for highly concentrated microsphere suspensions. Scientific Reports, 2016, 6, 35259.	3.3	27
167	Amyloid-Î² plaque deposition measured using propagation-based X-ray phase contrast CT imaging. Journal of Synchrotron Radiation, 2016, 23, 813-819.	2.4	27
168	High aspect ratio metal microcasting by hot embossing for X-ray optics fabrication. Microelectronic Engineering, 2017, 176, 6-10.	2.4	27
169	Simultaneous optimization of photons and electrons for mixed beam radiotherapy. Physics in Medicine and Biology, 2017, 62, 5840-5860.	3.0	27
170	Time Resolved in situ X-Ray Tomographic Microscopy Unraveling Dynamic Processes in Geologic Systems. Frontiers in Earth Science, 2020, 7, .	1.8	27
171	Corrosion protection of AA7449-T7951 friction stir welds by laser surface melting with an Excimer laser. Corrosion Science, 2011, 53, 3956-3969.	6.6	26
172	A column-generation-based method for multi-criteria direct aperture optimization. Physics in Medicine and Biology, 2013, 58, 621-639.	3.0	26
173	Hard x-ray phase imaging and tomography with a grating interferometer. , 2004, , .		25
174	Tomographic Hard X-ray Phase Contrast Micro- and Nano-imaging at TOMCAT. , 2010, , .		25
175	Xâ€ray spectrometry and imaging for ancient administrative handwritten documents. X-Ray Spectrometry, 2015, 44, 93-98.	1.4	25
176	Sensitivity-based optimization for the design of a grating interferometer for clinical X-ray phase contrast mammography. Optics Express, 2017, 25, 6349.	3.4	25
177	Combining Monte Carlo methods with coherent wave optics for the simulation of phase-sensitive X-ray imaging. Journal of Synchrotron Radiation, 2014, 21, 613-622.	2.4	24
178	Fast 3D reconstruction method for differential phase contrast X-ray CT. Optics Express, 2016, 24, 14564.	3.4	24
179	Propagation-based phase-contrast synchrotron imaging of aortic dissection in mice: from individual elastic lamella to 3D analysis. Scientific Reports, 2018, 8, 2223.	3.3	23
180	Hierarchical imaging and computational analysis of three-dimensional vascular network architecture in the entire postnatal and adult mouse brain. Nature Protocols, 2021, 16, 4564-4610.	12.0	23

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181	Single-cell resolution in high-resolution synchrotron X-ray CT imaging with gold nanoparticles. Journal of Synchrotron Radiation, 2014, 21, 242-250.	2.4	22
182	Ancient administrative handwritten documents: X-ray analysis and imaging. Journal of Synchrotron Radiation, 2015, 22, 446-451.	2.4	22
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