

Francesco Brun

List of Publications by Year in descending order

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76
papers

2,096
citations

236925

25
h-index

254184

43
g-index

83
all docs

83
docs citations

83
times ranked

2955
citing authors

#	ARTICLE	IF	CITATIONS
1	A Geant4 tool for edge-illumination X-ray phase-contrast imaging. <i>Journal of Instrumentation</i> , 2022, 17, C01043.	1.2	4
2	Regulation of Substrate Dissipation via Tunable Linear Elasticity Controls Cell Activity. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	7
3	PyPore3D: An Open Source Software Tool for Imaging Data Processing and Analysis of Porous and Multiphase Media. <i>Journal of Imaging</i> , 2022, 8, 187.	3.0	6
4	3D Spatial Distribution of Nanoparticles in Mice Brain Metastases by X-ray Phase-Contrast Tomography. <i>Frontiers in Oncology</i> , 2021, 11, 554668.	2.8	5
5	Chemo-physical properties of asbestos bodies in human lung tissues studied at the nano-scale by non-invasive, label free x-ray imaging and spectroscopic techniques. <i>Toxicology Letters</i> , 2021, 348, 18-27.	0.8	6
6	Asbestos bodies count and morphometry in bulk lung tissue samples by non-invasive X-ray micro-tomography. <i>Scientific Reports</i> , 2021, 11, 10608.	3.3	2
7	Motion artifacts assessment and correction using optical tracking in synchrotron radiation breast CT. <i>Medical Physics</i> , 2021, 48, 5343-5355.	3.0	8
8	Pre- and post-reconstruction digital image processing solutions for computed tomography with spectral photon counting detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2021, 1010, 165510.	1.6	6
9	Steerable3D: An ImageJ plugin for neurovascular enhancement in 3-D segmentation. <i>Physica Medica</i> , 2021, 81, 197-209.	0.7	5
10	Dual energy X-ray beam ptycho-fluorescence imaging. <i>Journal of Synchrotron Radiation</i> , 2021, 28, 1916-1920.	2.4	6
11	Characterization of the acquisition modes implemented in Pixirad-1/Pixie-III X-ray Detector: Effects of charge sharing correction on spectral resolution and image quality. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020, 955, 163220.	1.6	16
12	Edge-subtraction X-ray ptychographic imaging with pink beam synchrotron radiation and a single photon-counting detector. <i>Scientific Reports</i> , 2020, 10, 6526.	3.3	5
13	Assessment of plaque morphology in Alzheimer's mouse cerebellum using three-dimensional X-ray phase-based virtual histology. <i>Scientific Reports</i> , 2020, 10, 11233.	3.3	19
14	Single-shot K-edge subtraction x-ray discrete computed tomography with a polychromatic source and the Pixie-III detector. <i>Physics in Medicine and Biology</i> , 2020, 65, 055016.	3.0	10
15	High resolution 3D visualization of the spinal cord in a post-mortem murine model. <i>Biomedical Optics Express</i> , 2020, 11, 2235.	2.9	5
16	Computed microtomography study of untreated, shaped and filled mesiobuccal canals of maxillary first molars. <i>Australian Endodontic Journal</i> , 2019, 45, 72-78.	1.5	1
17	The importance of pore throats in controlling the permeability of magmatic foams. <i>Bulletin of Volcanology</i> , 2019, 81, 1.	3.0	6
18	Toward Improving Breast Cancer Imaging: Radiological Assessment of Propagation-Based Phase-Contrast CT Technology. <i>Academic Radiology</i> , 2019, 26, e79-e89.	2.5	24

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19	Volatile segregation and generation of highly vesiculated explosive magmas by volatile-melt fining processes: The case of the Campanian Ignimbrite eruption. <i>Chemical Geology</i> , 2019, 503, 1-14.	3.3	18
20	Exploring Alzheimer's disease mouse brain through X-ray phase contrast tomography: From the cell to the organ. <i>NeuroImage</i> , 2019, 184, 490-495.	4.2	56
21	Post-reconstruction 3D single-distance phase retrieval for multi-stage phase-contrast tomography with photon-counting detectors. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 510-516.	2.4	8
22	3D map of theranostic nanoparticles distribution in mice brain and liver by means of X-ray Phase Contrast Tomography. <i>Journal of Instrumentation</i> , 2018, 13, C01049-C01049.	1.2	2
23	An improved ring removal procedure for in-line x-ray phase contrast tomography. <i>Physics in Medicine and Biology</i> , 2018, 63, 045007.	3.0	14
24	Assessment of the effects of different sample perfusion procedures on phase-contrast tomographic images of mouse spinal cord. <i>Journal of Instrumentation</i> , 2018, 13, C03027-C03027.	1.2	7
25	On the Correlation between the Microscopic Structure and Properties of Phosphate-Cross-Linked Chitosan Gels. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 10761-10770.	8.0	28
26	Inpainting approaches to fill in detector gaps in phase contrast computed tomography. <i>Measurement Science and Technology</i> , 2018, 29, 014001.	2.6	6
27	Dynamic observations of vesiculation reveal the role of silicate crystals in bubble nucleation and growth in andesitic magmas. <i>Lithos</i> , 2018, 296-299, 532-546.	1.4	34
28	K-edge spectral computed tomography with a photon counting detector and discrete reconstruction. , 2018, 2018, 5245-5248.		2
29	From Projections to the 3D Analysis of the Regenerated Tissue. <i>Fundamental Biomedical Technologies</i> , 2018, , 69-90.	0.2	0
30	Characterization of noise and efficiency of the Pixirad-1/Pixie-III CdTe X-ray imaging detector. <i>Journal of Instrumentation</i> , 2018, 13, C12008-C12008.	1.2	11
31	Large-area single-photon-counting CdTe detector for synchrotron radiation computed tomography: a dedicated pre-processing procedure. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1068-1077.	2.4	33
32	3D imaging of theranostic nanoparticles in mice organs by means of x-ray phase contrast tomography. , 2018, , .		0
33	Imaging study of a phase-sensitive breast-CT system in continuous acquisition mode. <i>Journal of Instrumentation</i> , 2017, 12, C01016-C01016.	1.2	24
34	Optimization of propagation-based x-ray phase-contrast tomography for breast cancer imaging. <i>Physics in Medicine and Biology</i> , 2017, 62, 2315-2332.	3.0	47
35	SYRMEP Tomo Project: a graphical user interface for customizing CT reconstruction workflows. <i>Advanced Structural and Chemical Imaging</i> , 2017, 3, 4.	4.0	111
36	A Framework for Iterative Reconstruction in Phase-Contrast Computed Tomography Dedicated to the Breast. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2017, 1, 505-510.	3.7	5

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37	Size and specimen-dependent strategy for x-ray micro-ct and tem correlative analysis of nervous system samples. Scientific Reports, 2017, 7, 2858.	3.3	27
38	X-Ray Phase Contrast Tomography Reveals Early Vascular Alterations and Neuronal Loss in a Multiple Sclerosis Model. Scientific Reports, 2017, 7, 5890.	3.3	64
39	Heterogeneous vesiculation of 2011 El Hierro xeno-pumice revealed by X-ray computed microtomography. Bulletin of Volcanology, 2016, 78, 1.	3.0	7
40	Characterization of mouse spinal cord vascular network by means of synchrotron radiation X-ray phase contrast tomography. Physica Medica, 2016, 32, 1779-1784.	0.7	15
41	A framework for iterative reconstruction in phase-contrast computed tomography dedicated to the breast. , 2016, , .		0
42	Towards breast tomography with synchrotron radiation at Elettra: first images. Physics in Medicine and Biology, 2016, 61, 1634-1649.	3.0	74
43	Integrating longitudinal information in hippocampal volume measurements for the early detection of Alzheimer's disease. NeuroImage, 2016, 125, 834-847.	4.2	76
44	Phase-Contrast Clinical Breast CT: Optimization of Imaging Setups and Reconstruction Workflows. Lecture Notes in Computer Science, 2016, , 625-634.	1.3	4
45	A feasibility study of X-ray phase-contrast mammographic tomography at the Imaging and Medical beamline of the Australian Synchrotron. Journal of Synchrotron Radiation, 2015, 22, 1509-1523.	2.4	40
46	Enhanced and Flexible Software Tools for X-ray Computed Tomography at the Italian Synchrotron Radiation Facility Elettra. Fundamenta Informaticae, 2015, 141, 233-243.	0.4	87
47	High-Resolution X-Ray Techniques as New Tool to Investigate the 3D Vascularization of Engineered-Bone Tissue. Frontiers in Bioengineering and Biotechnology, 2015, 3, 133.	4.1	10
48	Medial temporal lobe high resolution magnetic resonance images for the early diagnosis of Alzheimer's disease. , 2015, 2015, 4274-7.		2
49	Simultaneous submicrometric 3D imaging of the micro-vascular network and the neuronal system in a mouse spinal cord. Scientific Reports, 2015, 5, 8514.	3.3	73
50	Imaging collagen packing dynamics during mineralization of engineered bone tissue. Acta Biomaterialia, 2015, 23, 309-316.	8.3	30
51	Clinical application of low-dose phase contrast breast CT: methods for the optimization of the reconstruction workflow. Biomedical Optics Express, 2015, 6, 3099.	2.9	35
52	A synchrotron radiation microtomography study of wettability and swelling of nanocomposite Alginate/Hydroxyapatite scaffolds for bone tissue engineering. IFMBE Proceedings, 2015, , 288-291.	0.3	3
53	Back Cover: Plasma Process. Polym. 2014. Plasma Processes and Polymers, 2014, 11, 196-196.	3.0	1
54	Platelet rich plasma enhances osteoconductive properties of a hydroxyapatite-tricalcium phosphate scaffold (Skelitea,®) for late healing of critical size rabbit calvarial defects. Journal of Cranio-Maxillo-Facial Surgery, 2014, 42, e70-e79.	1.7	33

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55	Plasma Modification of PCL Porous Scaffolds Fabricated by Solvent Casting/Particulate Leaching for Tissue Engineering. <i>Plasma Processes and Polymers</i> , 2014, 11, 184-195.	3.0	70
56	Modeling the failure of magmatic foams with application to Stromboli volcano, Italy. <i>Earth and Planetary Science Letters</i> , 2014, 403, 246-253.	4.4	1
57	A comparison of free software implementations of phase retrieval algorithms for propagation-based X-ray microtomographic imaging. , 2013, , .		1
58	Microstructural characterization and in vitro bioactivity of porous glass-ceramic scaffolds for bone regeneration by synchrotron radiation X-ray microtomography. <i>Journal of the European Ceramic Society</i> , 2013, 33, 1553-1565.	5.7	47
59	A Platelet-Rich Plasma-Based Membrane as a Periosteal Substitute with Enhanced Osteogenic and Angiogenic Properties: A New Concept for Bone Repair. <i>Tissue Engineering - Part A</i> , 2013, 19, 152-165.	3.1	63
60	Effective implementation of ring artifacts removal filters for synchrotron radiation microtomographic images. , 2013, , .		11
61	A comparison of 3D poly(μ -caprolactone) tissue engineering scaffolds produced with conventional and additive manufacturing techniques by means of quantitative analysis of SR $\frac{1}{4}$ -CT images. <i>Journal of Instrumentation</i> , 2013, 8, C07001-C07001.	1.2	7
62	Bone Turnover in Wild Type and Pleiotrophin-Transgenic Mice Housed for Three Months in the International Space Station (ISS). <i>PLoS ONE</i> , 2012, 7, e33179.	2.5	78
63	A four-dimensional X-ray tomographic microscopy study of bubble growth in basaltic foam. <i>Nature Communications</i> , 2012, 3, 1135.	12.8	78
64	Genus <i>Distichopora</i> (Cnidaria, Hydrozoa): from primary cyclosystem to adult pore organisation. <i>Coral Reefs</i> , 2012, 31, 715-730.	2.2	5
65	A comparative evaluation of ring artifacts reduction filters for X-ray computed microtomography images. , 2011, , .		7
66	Automated quantitative characterization of alginate/hydroxyapatite bone tissue engineering scaffolds by means of micro-CT image analysis. <i>Journal of Materials Science: Materials in Medicine</i> , 2011, 22, 2617-2629.	3.6	28
67	Three-dimensional analysis of the canal network of an Indonesian <i>Stylaster</i> (Cnidaria, Hydrozoa.) <i>Tj ETQq1 1 0.784314 rgBT /Overlock</i> 0,8 11		
68	Investigation of the microstructure and mineralogical composition of urinary calculi fragments by synchrotron radiation X-ray microtomography: a feasibility study. <i>Urological Research</i> , 2011, 39, 259-267.	1.5	26
69	Texture analysis of TEM micrographs of alginate gels for cell microencapsulation. <i>Microscopy Research and Technique</i> , 2011, 74, 58-66.	2.2	10
70	Pore3D: A software library for quantitative analysis of porous media. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 615, 326-332.	1.6	124
71	The SYRMEP Beamline of Elettra: Clinical Mammography and Bio-medical Applications. <i>AIP Conference Proceedings</i> , 2010, , .	0.4	87
72	Quantitative analysis of X-ray microtomography images of geomaterials: Application to volcanic rocks. , 2010, 6, 793-804.		72

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73	Efficient curve-skeleton computation for the analysis of biomedical 3d images - biomed 2010. Biomedical Sciences Instrumentation, 2010, 46, 475-80.	0.2	16
74	An improved method for ring artifacts removing in reconstructed tomographic images. IFMBE Proceedings, 2009, , 926-929.	0.3	20
75	Alginate/Hydroxyapatite Biocomposite For Bone Ingrowth: A Trabecular Structure With High And Isotropic Connectivity. Biomacromolecules, 2009, 10, 1575-1583.	5.4	183
76	X-ray differential phase-contrast imaging simulations with Geant4. Journal Physics D: Applied Physics, 0, , .	2.8	6