Francesco Brun

List of Publications by Year
in descending order

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	Alginate/Hydroxyapatite Biocomposite For Bone Ingrowth: A Trabecular Structure With High And Isotropic Connectivity. Biomacromolecules, 2009, 10, 1575-1583.	5.4	183
2	Pore3D: A software library for quantitative analysis of porous media. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 615, 326-332.	1.6	124
3	SYRMEP Tomo Project: a graphical user interface for customizing CT reconstruction workflows. Advanced Structural and Chemical Imaging, 2017, 3, 4.	4.0	111
4	The SYRMEP Beamline of Elettra: Clinical Mammography and Bio-medical Applications. AIP Conference Proceedings, 2010, , .	0.4	87
5	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
6	Bone Turnover in Wild Type and Pleiotrophin-Transgenic Mice Housed for Three Months in the International SpaceÂStation (ISS). PLoS ONE, 2012, 7, e33179.	2.5	78
7	A four-dimensional X-ray tomographic microscopy study of bubble growth in basaltic foam. Nature Communications, 2012, 3, 1135.	12.8	78
8	Integrating longitudinal information in hippocampal volume measurements for the early detection of Alzheimer's disease. NeuroImage, 2016, 125, 834-847.	4.2	76
9	Towards breast tomography with synchrotron radiation at Elettra: first images. Physics in Medicine and Biology, 2016, 61, 1634-1649.	3.0	74
10	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
11	Quantitative analysis of X-ray microtomography images of geomaterials: Application to volcanic rocks. , 2010, 6, 793-804.		72
12	Plasma Modification of PCL Porous Scaffolds Fabricated by Solventâ€Casting/Particulateâ€Leaching for Tissue Engineering. Plasma Processes and Polymers, 2014, 11, 184-195.	3.0	70
13	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
14	A Platelet-Rich Plasma-Based Membrane as a Periosteal Substitute with Enhanced Osteogenic and Angiogenic Properties: A New Concept for Bone Repair. Tissue Engineering - Part A, 2013, 19, 152-165.	3.1	63
15	Exploring Alzheimer's disease mouse brain through X-ray phase contrast tomography: From the cell to the organ. NeuroImage, 2019, 184, 490-495.	4.2	56
16	Microstructural characterization and in vitro bioactivity of porous glass-ceramic scaffolds for bone regeneration by synchrotron radiation X-ray microtomography. Journal of the European Ceramic Society, 2013, 33, 1553-1565.	5.7	47
17	Optimization of propagation-based x-ray phase-contrast tomography for breast cancer imaging. Physics in Medicine and Biology, 2017, 62, 2315-2332.	3.0	47
18	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

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19	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
20	Dynamic observations of vesiculation reveal the role of silicate crystals in bubble nucleation and growth in andesitic magmas. Lithos, 2018, 296-299, 532-546.	1.4	34
21	Platelet rich plasma enhances osteoconductive properties of a hydroxyapatite-Î²-tricalcium phosphate scaffold (Skeliteâ„¢) for late healing of critical size rabbit calvarial defects. Journal of Cranio-Maxillo-Facial Surgery, 2014, 42, e70-e79.	1.7	33
22	Large-area single-photon-counting CdTe detector for synchrotron radiation computed tomography: aÂdedicated pre-processing procedure. Journal of Synchrotron Radiation, 2018, 25, 1068-1077.	2.4	33
23	Imaging collagen packing dynamics during mineralization of engineered bone tissue. Acta Biomaterialia, 2015, 23, 309-316.	8.3	30
24	Automated quantitative characterization of alginate/hydroxyapatite bone tissue engineering scaffolds by means of micro-CT image analysis. Journal of Materials Science: Materials in Medicine, 2011, 22, 2617-2629.	3.6	28
25	On the Correlation between the Microscopic Structure and Properties of Phosphate-Cross-Linked Chitosan Gels. ACS Applied Materials & Interfaces, 2018, 10, 10761-10770.	8.0	28
26	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
27	Investigation of the microstructure and mineralogical composition of urinary calculi fragments by synchrotron radiation X-ray microtomography: a feasibility study. Urological Research, 2011, 39, 259-267.	1.5	26
28	Imaging study of a phase-sensitive breast-CT system in continuous acquisition mode. Journal of Instrumentation, 2017, 12, C01016-C01016.	1.2	24
29	Toward Improving Breast Cancer Imaging: Radiological Assessment of Propagation-Based Phase-Contrast CT Technology. Academic Radiology, 2019, 26, e79-e89.	2.5	24
30	An improved method for ring artifacts removing in reconstructed tomographic images. IFMBE Proceedings, 2009, , 926-929.	0.3	20
31	Assessment of plaque morphology in Alzheimerâ€™s mouse cerebellum using three-dimensional X-ray phase-based virtual histology. Scientific Reports, 2020, 10, 11233.	3.3	19
32	Volatile segregation and generation of highly vesiculated explosive magmas by volatile-melt fining processes: The case of the Campanian Ignimbrite eruption. Chemical Geology, 2019, 503, 1-14.	3.3	18
33	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. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 955, 163220.	1.6	16
34	Efficient curve-skeleton computation for the analysis of biomedical 3d images - biomed 2010. Biomedical Sciences Instrumentation, 2010, 46, 475-80.	0.2	16
35	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
36	An improved ring removal procedure for in-line x-ray phase contrast tomography. Physics in Medicine and Biology, 2018, 63, 045007.	3.0	14

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37	Three-dimensional analysis of the canal network of an Indonesian Stylaster (Cnidaria, Hydrozoa,) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.8	11
38	Effective implementation of ring artifacts removal filters for synchrotron radiation microtomographic images. , 2013, , .		11
39	Characterization of noise and efficiency of the Pixirad-1/Pixie-III CdTe X-ray imaging detector. Journal of Instrumentation, 2018, 13, C12008-C12008.	1.2	11
40	Texture analysis of TEM micrographs of alginate gels for cell microencapsulation. Microscopy Research and Technique, 2011, 74, 58-66.	2.2	10
41	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
42	Single-shot K-edge subtraction x-ray discrete computed tomography with a polychromatic source and the Pixie-III detector. Physics in Medicine and Biology, 2020, 65, 055016.	3.0	10
43	Motion artifacts assessment and correction using optical tracking in synchrotron radiation breast CT. Medical Physics, 2021, 48, 5343-5355.	3.0	8
44	Post-reconstruction 3D single-distance phase retrieval for multi-stage phase-contrast tomography with photon-counting detectors. Journal of Synchrotron Radiation, 2019, 26, 510-516.	2.4	8
45	A comparative evaluation of ring artifacts reduction filters for X-ray computed microtomography images. , 2011, , .		7
46	A comparison of 3D poly(Îµ-caprolactone) tissue engineering scaffolds produced with conventional and additive manufacturing techniques by means of quantitative analysis of SR Î¼-CT images. Journal of Instrumentation, 2013, 8, C07001-C07001.	1.2	7
47	Heterogeneous vesiculation of 2011 El Hierro xeno-pumice revealed by X-ray computed microtomography. Bulletin of Volcanology, 2016, 78, 1.	3.0	7
48	Assessment of the effects of different sample perfusion procedures on phase-contrast tomographic images of mouse spinal cord. Journal of Instrumentation, 2018, 13, C03027-C03027.	1.2	7
49	Regulation of Substrate Dissipation via Tunable Linear Elasticity Controls Cell Activity. Advanced Functional Materials, 2022, 32, .	14.9	7
50	Inpainting approaches to fill in detector gaps in phase contrast computed tomography. Measurement Science and Technology, 2018, 29, 014001.	2.6	6
51	The importance of pore throats in controlling the permeability of magmatic foams. Bulletin of Volcanology, 2019, 81, 1.	3.0	6
52	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. Toxicology Letters, 2021, 348, 18-27.	0.8	6
53	Pre- and post-reconstruction digital image processing solutions for computed tomography with spectral photon counting detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1010, 165510.	1.6	6
54	X-ray dïï¬€erential phase-contrast imaging simulations with Geant4. Journal Physics D: Applied Physics, 0, , .	2.8	6

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55	Dual energy X-ray beam ptycho-fluorescence imaging. Journal of Synchrotron Radiation, 2021, 28, 1916-1920.	2.4	6
56	PyPore3D: An Open Source Software Tool for Imaging Data Processing and Analysis of Porous and Multiphase Media. Journal of Imaging, 2022, 8, 187.	3.0	6
57	Genus Distichopora (Cnidaria, Hydrozoa): from primary cyclosystem to adult pore organisation. Coral Reefs, 2012, 31, 715-730.	2.2	5
58	A Framework for Iterative Reconstruction in Phase-Contrast Computed Tomography Dedicated to the Breast. IEEE Transactions on Radiation and Plasma Medical Sciences, 2017, 1, 505-510.	3.7	5
59	Edge-subtraction X-ray ptychographic imaging with pink beam synchrotron radiation and a single photon-counting detector. Scientific Reports, 2020, 10, 6526.	3.3	5
60	3D Spatial Distribution of Nanoparticles in Mice Brain Metastases by X-ray Phase-Contrast Tomography. Frontiers in Oncology, 2021, 11, 554668.	2.8	5
61	Steerable3D: An ImageJ plugin for neurovascular enhancement in 3-D segmentation. Physica Medica, 2021, 81, 197-209.	0.7	5
62	High resolution 3D visualization of the spinal cord in a post-mortem murine model. Biomedical Optics Express, 2020, 11, 2235.	2.9	5
63	Phase-Contrast Clinical Breast CT: Optimization of Imaging Setups and Reconstruction Workflows. Lecture Notes in Computer Science, 2016, , 625-634.	1.3	4
64	A Geant4 tool for edge-illumination X-ray phase-contrast imaging. Journal of Instrumentation, 2022, 17, C01043.	1.2	4
65	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
66	Medial temporal lobe high resolution magnetic resonance images for the early diagnosis of Alzheimer's disease. , 2015, 2015, 4274-7.		2
67	3D map of theranostic nanoparticles distribution in mice brain and liver by means of X-ray Phase Contrast Tomography. Journal of Instrumentation, 2018, 13, C01049-C01049.	1.2	2
68	K-edge spectral computed tomography with a photon counting detector and discrete reconstruction. , 2018, 2018, 5245-5248.		2
69	Asbestos bodies count and morphometry in bulk lung tissue samples by non-invasive X-ray micro-tomography. Scientific Reports, 2021, 11, 10608.	3.3	2
70	A comparison of free software implementations of phase retrieval algorithms for propagation-based X-ray microtomographic imaging. , 2013, , .		1
71	Back Cover: Plasma Process. Polym. 2â•2014. Plasma Processes and Polymers, 2014, 11, 196-196.	3.0	1
72	Modeling the failure of magmatic foams with application to Stromboli volcano, Italy. Earth and Planetary Science Letters, 2014, 403, 246-253.	4.4	1

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73	Computed microtomography study of untreated, shaped and filled mesiobuccal canals of maxillary first molars. Australian Endodontic Journal, 2019, 45, 72-78.	1.5	1
74	A framework for iterative reconstruction in phase-contrast computed tomography dedicated to the breast. , 2016, , .		0
75	From Projections to the 3D Analysis of the Regenerated Tissue. Fundamental Biomedical Technologies, 2018, , 69-90.	0.2	0
76	3D imaging of theranostic nanoparticles in mice organs by means of x-ray phase contrast tomography. , 2018, , .		0