

Lucia Mancini

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123
papers

2,829
citations

32
h-index

48
g-index

147
ext. papers

3,403
ext. citations

3.9
avg, IF

5
L-index

#	Paper	IF	Citations
123	PITRE: software for phase-sensitive X-ray image processing and tomography reconstruction. <i>Journal of Synchrotron Radiation</i> , 2012 , 19, 836-45	2.4	162
122	An introduction to the application of X-ray microtomography to the three-dimensional study of igneous rocks. <i>Lithos</i> , 2012 , 148, 262-276	2.9	147
121	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	1.2	108
120	The origin of squamates revealed by a Middle Triassic lizard from the Italian Alps. <i>Nature</i> , 2018 , 557, 706-709	50.4	93
119	High resolution microtomography-based CFD simulation of flow and heat transfer in aluminum metal foams. <i>Applied Thermal Engineering</i> , 2014 , 69, 230-240	5.8	90
118	Monitoring of the heavy-metal hyperaccumulation in vegetal tissues by X-ray radiography and by femto-second laser induced breakdown spectroscopy. <i>Microscopy Research and Technique</i> , 2007 , 70, 147-53	2.8	72
117	Computed micro-tomographic evaluation of glide path with nickel-titanium rotary PathFile in maxillary first molars curved canals. <i>Journal of Endodontics</i> , 2012 , 38, 389-93	4.7	71
116	A four-dimensional X-ray tomographic microscopy study of bubble growth in basaltic foam. <i>Nature Communications</i> , 2012 , 3, 1135	17.4	69
115	Three-dimensional investigation of volcanic textures by X-ray microtomography and implications for conduit processes. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	65
114	Enhanced and Flexible Software Tools for X-ray Computed Tomography at the Italian Synchrotron Radiation Facility Elettra. <i>Fundamenta Informaticae</i> , 2015 , 141, 233-243	1	63
113	Gas-driven filter pressing in magmas: Insights into in-situ melt segregation from crystal mushes. <i>Geology</i> , 2015 , 43, 699-702	5	61
112	Large vesicles record pathways of degassing at basaltic volcanoes. <i>Bulletin of Volcanology</i> , 2008 , 70, 1023-1029	5.9	59
111	Vesiculation in magmas from Stromboli and implications for normal Strombolian activity and paroxysmal explosions in basaltic systems. <i>Journal of Geophysical Research</i> , 2009 , 114,		58
110	Phason elastic constants of the icosahedral Al-Pd-Mn phase derived from diffuse scattering measurements. <i>Philosophical Magazine Letters</i> , 2001 , 81, 273-283	1	55
109	The effects of rock heterogeneity on compaction localization in porous carbonates. <i>Journal of Structural Geology</i> , 2014 , 67, 75-93	3	54
108	Three-dimensional Quantitative Analysis of Bread Crumb by X-ray Microtomography. <i>Journal of Food Science</i> , 2006 , 70, E265-E272	3.4	54
107	Texture analysis of volcanic rock samples: Quantitative study of crystals and vesicles shape preferred orientation from X-ray microtomography data. <i>Journal of Volcanology and Geothermal Research</i> , 2011 , 202, 83-95	2.8	53

106	The late Early Pleistocene human dental remains from Uadi Aalad and Mulhuli-Amo (Buia), Eritrean Danakil: macromorphology and microstructure. <i>Journal of Human Evolution</i> , 2014 , 74, 96-113	3.1	51
105	Beeswax as dental filling on a neolithic human tooth. <i>PLoS ONE</i> , 2012 , 7, e44904	3.7	49
104	Dynamic intensity normalization using eigen flat fields in X-ray imaging. <i>Optics Express</i> , 2015 , 23, 27975-89	3.9	44
103	A Novel Approach to the Study of Bread Porous Structure: Phase-contrast X-Ray Microtomography. <i>Journal of Food Science</i> , 2004 , 69, FEP38-FEP43	3.4	44
102	Micro-Computed Tomography Evaluation of ProTaper Next and BioRace Shaping Outcomes in Maxillary First Molar Curved Canals. <i>Journal of Endodontics</i> , 2015 , 41, 1706-10	4.7	41
101	TomoBank: a tomographic data repository for computational x-ray science. <i>Measurement Science and Technology</i> , 2018 , 29, 034004	2	41
100	Micro-biomechanics of the Kebara 2 hyoid and its implications for speech in Neanderthals. <i>PLoS ONE</i> , 2013 , 8, e82261	3.7	38
99	Floating stones off El Hierro, Canary Islands: xenoliths of pre-island sedimentary origin in the early products of the October 2011 eruption. <i>Solid Earth</i> , 2012 , 3, 97-110	3.3	36
98	Micro-CT evaluation of several glide path techniques and ProTaper Next shaping outcomes in maxillary first molar curved canals. <i>International Endodontic Journal</i> , 2017 , 50, 387-397	5.4	35
97	High resolution X-ray microtomography-based CFD simulation for the characterization of flow permeability and effective thermal conductivity of aluminum metal foams. <i>Experimental Thermal and Fluid Science</i> , 2015 , 67, 30-36	3	35
96	Brief communication: two human fossil deciduous molars from the Sangiran dome (Java, Indonesia): outer and inner morphology. <i>American Journal of Physical Anthropology</i> , 2012 , 147, 472-81	2.5	35
95	Investigation of structural defects and inhomogeneities in Al-Pd-Mn icosahedral quasicrystals by combined synchrotron X-ray topography and phase radiography. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1998 , 78, 1175-1194		35
94	3D Pore-network quantitative analysis in deformed carbonate grainstones. <i>Marine and Petroleum Geology</i> , 2017 , 82, 251-264	4.7	32
93	Imaging techniques for the study of food microstructure: a review. <i>Advances in Food and Nutrition Research</i> , 2006 , 51, 205-63	6	32
92	Phase imaging using highly coherent X-rays: radiography, tomography, diffraction topography. <i>Journal of Synchrotron Radiation</i> , 2000 , 7, 196-201	2.4	32
91	A detailed study of gold-nanoparticle loaded cells using X-ray based techniques for cell-tracking applications with single-cell sensitivity. <i>Nanoscale</i> , 2013 , 5, 3337-45	7.7	31
90	The contribution of synchrotron X-ray computed microtomography to understanding volcanic processes. <i>Journal of Synchrotron Radiation</i> , 2010 , 17, 215-21	2.4	31
89	DID NEANDERTHALS PLAY MUSIC? X-RAY COMPUTED MICRO-TOMOGRAPHY OF THE DIVJE BABE BLUTE. <i>Archaeometry</i> , 2012 , 54, 581-590	1.6	29

88	Near-liquidus growth of feldspar spherulites in trachytic melts: 3D morphologies and implications in crystallization mechanisms. <i>Lithos</i> , 2015 , 216-217, 93-105	2.9	28
87	Fluid flow simulation and permeability computation in deformed porous carbonate grainstones. <i>Advances in Water Resources</i> , 2018 , 115, 95-111	4.7	27
86	Inner tooth morphology of Homo erectus from Zhoukoudian. New evidence from an old collection housed at Uppsala University, Sweden. <i>Journal of Human Evolution</i> , 2018 , 116, 1-13	3.1	27
85	Focusing X-rays with simple arrays of prism-like structures. <i>Journal of Synchrotron Radiation</i> , 2004 , 11, 248-53	2.4	27
84	Degassing behaviour of vesiculated basaltic magmas: an example from Ambrym volcano, Vanuatu Arc. <i>Journal of Volcanology and Geothermal Research</i> , 2012 , 233-234, 55-64	2.8	25
83	Hierarchical porosity in real quasicrystals. <i>Philosophical Magazine Letters</i> , 1998 , 78, 159-167	1	24
82	The Middle Pleistocene (MIS 12) human dental remains from Fontana Ranuccio (Latium) and Visogliano (Friuli-Venezia Giulia), Italy. A comparative high resolution endostructural assessment. <i>PLoS ONE</i> , 2018 , 13, e0189773	3.7	24
81	Controlled release of a highly hydrophilic API from lipid microspheres obtained by prilling: analysis of drug and water diffusion processes with X-ray-based methods. <i>Journal of Controlled Release</i> , 2012 , 158, 393-402	11.7	23
80	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, 259-67		23
79	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	2.9	23
78	Using synchrotron X-ray microtomography to characterize the pore network of reservoir rocks: A case study on carbonates. <i>Advances in Water Resources</i> , 2016 , 95, 254-263	4.7	20
77	Plagioclase nucleation and growth kinetics in a hydrous basaltic melt by decompression experiments. <i>Contributions To Mineralogy and Petrology</i> , 2015 , 170, 1	3.5	20
76	Solidification and Turbulence (Non-laminar) during Magma Ascent: Insights from 2D and 3D Analyses of Bubbles and Minerals in an Etnean Dyke. <i>Journal of Petrology</i> , 2017 , 58, 1511-1533	3.9	19
75	Virtual histological assessment of the prenatal life history and age at death of the Upper Paleolithic fetus from Ostuni (Italy). <i>Scientific Reports</i> , 2017 , 7, 9427	4.9	19
74	The Grizzly Lake complex (Yellowstone Volcano, USA): Mixing between basalt and rhyolite unraveled by microanalysis and X-ray microtomography. <i>Lithos</i> , 2016 , 260, 457-474	2.9	19
73	Investigation of the osteitis deformans phases in snake vertebrae by double-pulse laser-induced breakdown spectroscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2010 , 398, 1095-107	4.4	18
72	Coherent X-ray diffraction and phason fluctuations in quasicrystals. <i>Europhysics Letters</i> , 2001 , 54, 753-759	6	18
71	The 3D quantitative lattice and shape preferred orientation of a mylonitised metagranite from Monte Rosa (Western Alps): Combining neutron diffraction texture analysis and synchrotron X-ray microtomography. <i>Journal of Structural Geology</i> , 2014 , 63, 91-105	3	16

70	Evaluation of microstructural properties of coffee beans by synchrotron X-ray microtomography: a methodological approach. <i>Journal of Food Science</i> , 2011 , 76, E222-31	3.4	16
69	Synchrotron X-ray computed microtomography investigation of a mortar affected by alkali-silica reaction: a quantitative characterization of its microstructural features. <i>Journal of Materials Science</i> , 2011 , 46, 6633-6641	4.3	16
68	An investigation of mortars affected by alkali-silica reaction by X-ray synchrotron microtomography: a preliminary study. <i>Journal of Materials Science</i> , 2009 , 44, 5815-5823	4.3	16
67	Permeability measurements of Campi Flegrei pyroclastic products: An example from the Campanian Ignimbrite and Monte Nuovo eruptions. <i>Journal of Volcanology and Geothermal Research</i> , 2014 , 272, 16-22	2.8	15
66	Phonon- and phason-type spherical inclusions in icosahedral quasicrystals. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, L363-L370	1.8	15
65	Structural microanalysis with synchrotron radiation: archaeometric applications at Elettra. <i>Journal of Neutron Research</i> , 2006 , 14, 75-79	0.5	14
64	New features of dislocation images in third-generation synchrotron radiation topographs. <i>Journal of Synchrotron Radiation</i> , 1996 , 3, 173-84	2.4	13
63	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	4.2	13
62	A 3D imaging textural characterization of pyroclastic products from the 1538 AD Monte Nuovo eruption (Campi Flegrei, Italy). <i>Lithos</i> , 2019 , 340-341, 316-331	2.9	12
61	A combined synchrotron radiation micro computed tomography and micro X-ray diffraction study on deleterious alkali-silica reaction. <i>Journal of Materials Science</i> , 2015 , 50, 7985-7997	4.3	12
60	Analysis of Intracellular Magnesium and Mineral Depositions during Osteogenic Commitment of 3D Cultured Saos2 Cells. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	12
59	First 3D imaging characterization of Pele's hair from Kilauea volcano (Hawaii). <i>Scientific Reports</i> , 2019 , 9, 1711	4.9	11
58	A novel protocol for resolving feldspar crystals in synchrotron X-ray microtomographic images of crystallized natural magmas and synthetic analogs. <i>American Mineralogist</i> , 2016 , 101, 2301-2311	2.9	11
57	Integrating X-Ray Computed Tomography With Chemical Imaging to Quantify Mineral Re-crystallization From Granulite to Eclogite Metamorphism in the Western Italian Alps (Sesia-Lanzo Zone). <i>Frontiers in Earth Science</i> , 2019 , 7,	3.5	11
56	3D microstructure of magnesium potassium phosphate ceramics from X-ray tomography: new insights into the reaction mechanisms. <i>Journal of Materials Science</i> , 2019 , 54, 3748-3760	4.3	11
55	Green, grey and black: A comparative study of Sierra de las Navajas (Mexico) and Lipari (Italy) obsidians. <i>Quaternary International</i> , 2018 , 467, 369-390	2	11
54	Microstructural characterization of dental zinc phosphate cements using combined small angle neutron scattering and microfocus X-ray computed tomography. <i>Dental Materials</i> , 2017 , 33, 402-417	5.7	10
53	Three-dimensional distribution of primary melt inclusions in garnets by X-ray microtomography. <i>American Mineralogist</i> , 2018 , 103, 911-926	2.9	10

52	Influence of aggregate mineralogy on alkali-silica reaction studied by X-ray powder diffraction and imaging techniques. <i>Journal of Materials Science</i> , 2012 , 47, 2845-2855	4.3	10
51	Three-dimensional analysis of the canal network of an Indonesian Stylaster (Cnidaria, Hydrozoa, Stylasteridae) by means of X-ray computed microtomography. <i>Zoomorphology</i> , 2011 , 130, 85-95	1	10
50	Production and detachment of oxide crystal shells on bubble walls during experimental vesiculation of andesitic magmas. <i>Contributions To Mineralogy and Petrology</i> , 2019 , 174, 1	3.5	9
49	Implementation of Dynamic Neutron Radiography and Integrated X-Ray and Neutron Tomography in Porous Carbonate Reservoir Rocks. <i>Frontiers in Earth Science</i> , 2019 , 7,	3.5	9
48	Exploring Hominin and Non-hominin Primate Dental Fossil Remains with Neutron Microtomography. <i>Physics Procedia</i> , 2017 , 88, 109-115		8
47	An Innovative CCD-Based High-Resolution CT System for Analysis of Trabecular Bone Tissue. <i>IEEE Transactions on Nuclear Science</i> , 2006 , 53, 2584-2590	1.7	8
46	Detecting microdiamonds in kimberlite drill-hole cores by computed tomography. <i>International Journal of Mineral Processing</i> , 2005 , 75, 173-188		8
45	Microstructural evolution and texture analysis of magnesium phosphate cement. <i>Journal of the American Ceramic Society</i> , 2020 , 103, 1414-1424	3.8	8
44	Morphological Evolution of Zn-Sponge Electrodes Monitored by In Situ X-ray Computed Microtomography. <i>ACS Applied Energy Materials</i> , 2020 , 3, 4931-4940	6.1	7
43	Synthetic calcium carbonate improves the effectiveness of treatments with nanolime to contrast decay in highly porous limestone. <i>Scientific Reports</i> , 2019 , 9, 15278	4.9	7
42	Mineral inclusions are not immutable: Evidence of post-entrapment thermally-induced shape change of quartz in garnet. <i>Earth and Planetary Science Letters</i> , 2021 , 555, 116708	5.3	7
41	Electrochemical reconstruction of a heavily corroded Tarentum hemiobolus silver coin: a study based on microfocus X-ray computed microtomography. <i>Journal of Archaeological Science</i> , 2014 , 52, 24-30	3.9	6
40	Quantitative 3D microstructural analysis of naturally deformed amphibolite from the Southern Alps (Italy): microstructures, CPO and seismic anisotropy from a fossil extensional margin. <i>Geological Society Special Publication</i> , 2015 , 409, 201-222	1.7	6
39	Heterogeneous vesiculation of 2011 El Hierro xeno-pumice revealed by X-ray computed microtomography. <i>Bulletin of Volcanology</i> , 2016 , 78, 1	2.4	5
38	Microtomography-based CFD Analysis of Transport in Open-Cell Aluminum Metal Foams. <i>Journal of Physics: Conference Series</i> , 2014 , 501, 012021	0.3	5
37	Extended investigation of porosity in quasicrystals by synchrotron X-ray phase contrast radiography in icosahedral AlPdMn grains. <i>Journal of Crystal Growth</i> , 2005 , 281, 623-638	1.6	5
36	Halloysite nanotubes/pluronic nanocomposites for waterlogged archeological wood: thermal stability and X-ray microtomography. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020 , 141, 981-989	4.1	4
35	The Skaros effusive sequence at Santorini (Greece): Petrological and geochemical constraints on an interplinian cycle. <i>Lithos</i> , 2020 , 362-363, 105504	2.9	4

34	About a method for compressing x-ray computed microtomography data. <i>Measurement Science and Technology</i> , 2018 , 29, 044002	2	4
33	X-ray optics and imaging with hard coherent synchrotron radiation 1997 ,		4
32	Quantitative evaluation of bone-mineral density loss using X-ray coherent scattering. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2007 , 579, 318-321	1.2	4
31	Bone diagenesis in archaeological and contemporary human remains: an investigation of bone 3D microstructure and minero-chemical assessment. <i>Archaeological and Anthropological Sciences</i> , 2020 , 12, 1	1.8	4
30	Garnets from Val d'Aula Rodingites, Piedmont, Italy: An Investigation of Their Gemological, Spectroscopic and Crystal Chemical Properties. <i>Minerals (Basel, Switzerland)</i> , 2019 , 9, 728	2.4	4
29	In Situ and Ex Situ X-Ray Microspectroelectrochemical Methods for the Study of Zinc-Air Batteries 2018 , 174-194		4
28	A quantitative analysis of 3D-cell distribution in regenerating muscle-skeletal system with synchrotron X-ray computed microtomography. <i>Scientific Reports</i> , 2018 , 8, 14145	4.9	4
27	Studying model suspensions using high resolution synchrotron X-ray microtomography. <i>Chemical Engineering Research and Design</i> , 2017 , 117, 756-772	5.5	3
26	3D X-ray tomographic analysis reveals how coesite is preserved in Muong Nong-type tektites. <i>Scientific Reports</i> , 2020 , 10, 20608	4.9	3
25	Deep sea explosive eruptions may be not so different from subaerial eruptions. <i>Scientific Reports</i> , 2020 , 10, 6709	4.9	3
24	Investigation of nano-microstructural changes in Maastricht limestone after treatment with nanolime suspension. <i>Applied Physics A: Materials Science and Processing</i> , 2020 , 126, 1	2.6	3
23	A compact and flexible induction furnace for in situ X-ray microradiography and computed microtomography at Elettra: design, characterization and first tests. <i>Journal of Synchrotron Radiation</i> , 2018 , 25, 1172-1181	2.4	3
22	The importance of pore throats in controlling the permeability of magmatic foams. <i>Bulletin of Volcanology</i> , 2019 , 81, 1	2.4	3
21	Growth of Neanderthal infants from Krapina (120-130 ka), Croatia. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021 , 288, 20212079	4.4	3
20	Pore-scale dual-porosity and dual-permeability modeling in an exposed multi-facies porous carbonate reservoir. <i>Marine and Petroleum Geology</i> , 2021 , 128, 105004	4.7	3
19	Enhanced contrast in X-ray microtomographic images of the membranous labyrinth using different X-ray sources and scanning modes. <i>Journal of Anatomy</i> , 2018 , 233, 770-782	2.9	3
18	X-ray computed microtomography of <i>Megachirella wachtleri</i> . <i>Scientific Data</i> , 2018 , 5, 180244	8.2	2
17	Micro-ATR FTIR, SEM-EDS and X-ray micro-CT: an innovative multi-technique approach to investigate bone affected by peri-implantitis. <i>International Journal of Oral and Maxillofacial Implants</i> , 2019 , 34, 631-641	2.8	2

16	Dental cementum virtual histology of Neanderthal teeth from Krapina (Croatia, 130-120 kyr): an informed estimate of age, sex and adult stressors.. <i>Journal of the Royal Society Interface</i> , 2022 , 19, 20210820	4.1	2
15	Advanced x-ray tomography: experiment, modeling, and algorithms. <i>Measurement Science and Technology</i> , 2018 , 29, 080101	2	1
14	Modeling the failure of magmatic foams with application to Stromboli volcano, Italy. <i>Earth and Planetary Science Letters</i> , 2014 , 403, 246-253	5.3	1
13	An infant burial from Arma Veirana in northwestern Italy provides insights into funerary practices and female personhood in early Mesolithic Europe.. <i>Scientific Reports</i> , 2021 , 11, 23735	4.9	1
12	Virtual histology of archaeological human deciduous prenatal enamel through synchrotron X-ray computed microtomography images.. <i>Journal of Synchrotron Radiation</i> , 2022 , 29, 247-253	2.4	1
11	Diagenesis of juvenile skeletal remains: A multimodal and multiscale approach to examine the post-mortem decay of children's bones. <i>Journal of Archaeological Science</i> , 2021 , 135, 105477	2.9	1
10	Synchrotron radiation X-ray microtomography for the visualization of intra-cochlear anatomy in human temporal bones implanted with a perimodiolar cochlear implant electrode array. <i>Journal of Synchrotron Radiation</i> , 2021 , 28, 327-332	2.4	1
9	Living in darkness: Exploring adaptation of <i>Proteus anguinus</i> in 3 dimensions by X-ray imaging.. <i>GigaScience</i> , 2022 , 11,	7.6	1
8	New evaluation of the Castel di Guido 'hyoid'. <i>Journal of Anthropological Sciences</i> , 2016 , 94, 231-5	0.6	1
7	Tracing the mobility of a Late Epigravettian (~ 13ka) male infant from Grotte di Pradis (Northeastern Italian Prealps) at high-temporal resolution.. <i>Scientific Reports</i> , 2022 , 12, 8104	4.9	0
6	3D-localisation of cochlear implant electrode contacts in relation to anatomical structures from in vivo cone-beam computed tomography. <i>Hearing Research</i> , 2022 , 108537	3.9	0
5	Detection of lead in Zea mays by dual-energy X-ray microtomography at the SYRMEP beamline of the ELETTRA synchrotron and by atomic absorption spectroscopy. <i>Microscopy Research and Technique</i> , 2010 , 73, 638-49	2.8	
4	Directional differences in head stabilisation in <i>Acanthodactylus pardalis</i> lizards. <i>Journal of Biomechanics</i> , 2021 , 121, 110418	2.9	
3	The Use of Synchrotron-Based X-ray Microtomography for the Pore Network Quantitative and Computational Fluid Dynamics Experiments on Porous Carbonate Rocks. <i>Springer Proceedings in Physics</i> , 2021 , 203-217	0.2	
2	Three-dimensional distribution of primary melt inclusions in garnets by X-ray microtomography. <i>American Mineralogist</i> , 2018 , 103, 911-926	2.9	
1	CO2 storage in the Antarctica Sub-Continental Lithospheric Mantle as revealed by intra- and inter-granular fluids. <i>Lithos</i> , 2022 , 416-417, 106643	2.9	