Lucia Mancini

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	<i>PITRE</i> : software for phase-sensitive X-ray image processing and tomography reconstruction. Journal of Synchrotron Radiation, 2012, 19, 836-845.	2.4	203
2	An introduction to the application of X-ray microtomography to the three-dimensional study of igneous rocks. Lithos, 2012, 148, 262-276.	1.4	182
3	The origin of squamates revealed by a Middle Triassic lizard from the Italian Alps. Nature, 2018, 557, 706-709.	27.8	145
4	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
5	High resolution microtomography-based CFD simulation of flow andÂheat transfer in aluminum metal foams. Applied Thermal Engineering, 2014, 69, 230-240.	6.0	118
6	Gas-driven filter pressing in magmas: Insights into in-situ melt segregation from crystal mushes. Geology, 2015, 43, 699-702.	4.4	88
7	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
8	Monitoring of the heavy-metal hyperaccumulation in vegetal tissues by X-ray radiography and by femto-second laser induced breakdown spectroscopy. Microscopy Research and Technique, 2007, 70, 147-153.	2.2	84
9	Computed Micro-Tomographic Evaluation of Glide Path withÂNickel-Titanium Rotary PathFile in Maxillary First MolarsÂCurved Canals. Journal of Endodontics, 2012, 38, 389-393.	3.1	82
10	A four-dimensional X-ray tomographic microscopy study of bubble growth in basaltic foam. Nature Communications, 2012, 3, 1135.	12.8	78
11	Three-dimensional investigation of volcanic textures by X-ray microtomography and implications for conduit processes. Geophysical Research Letters, 2006, 33, .	4.0	76
12	Dynamic intensity normalization using eigen flat fields in X-ray imaging. Optics Express, 2015, 23, 27975.	3.4	74
13	Investigation of structural defects and inhomogeneities in Al-Pd-Mn icosahedral quasicrystals by combined synchrotron X-ray topography and phase radiography. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 1175-1194.	0.6	71
14	Vesiculation in magmas from Stromboli and implications for normal Strombolian activity and paroxysmal explosions in basaltic systems. Journal of Geophysical Research, 2009, 114, .	3.3	69
15	Beeswax as Dental Filling on a Neolithic Human Tooth. PLoS ONE, 2012, 7, e44904.	2.5	69
16	Large vesicles record pathways of degassing at basaltic volcanoes. Bulletin of Volcanology, 2008, 70, 1023-1029.	3.0	65
17	Texture analysis of volcanic rock samples: Quantitative study of crystals and vesicles shape preferred orientation from X-ray microtomography data. Journal of Volcanology and Geothermal Research, 2011, 202, 83-95.	2.1	62
18	The effects of rock heterogeneity on compaction localization in porous carbonates. Journal of Structural Geology, 2014, 67, 75-93.	2.3	62

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19	Three-dimensional Quantitative Analysis of Bread Crumb by X-ray Microtomography. Journal of Food Science, 2005, 70, E265-E272.	3.1	59
20	The late Early Pleistocene human dental remains from Uadi Aalad and Mulhuli-Amo (Buia), Eritrean Danakil: Macromorphology and microstructure. Journal of Human Evolution, 2014, 74, 96-113.	2.6	59
21	Phase imaging using highly coherent X-rays: radiography, tomography, diffraction topography. Journal of Synchrotron Radiation, 2000, 7, 196-201.	2.4	58
22	Phason elastic constants of the icosahedral Al-Pd-Mn phase derived from diffuse scattering measurements. Philosophical Magazine Letters, 2001, 81, 273-283.	1.2	58
23	TomoBank: a tomographic data repository for computational x-ray science. Measurement Science and Technology, 2018, 29, 034004.	2.6	55
24	A Novel Approach to the Study of Bread Porous Structure: Phase-contrast X-Ray Microtomography. Journal of Food Science, 2004, 69, FEP38-FEP43.	3.1	52
25	Micro–Computed Tomography Evaluation of ProTaper Next and BioRace Shaping Outcomes in Maxillary First Molar Curved Canals. Journal of Endodontics, 2015, 41, 1706-1710.	3.1	51
26	Micro-Biomechanics of the Kebara 2 Hyoid and Its Implications for Speech in Neanderthals. PLoS ONE, 2013, 8, e82261.	2.5	50
27	Floating stones off El Hierro, Canary Islands: xenoliths of pre-island sedimentary origin in the early products of the October 2011 eruption. Solid Earth, 2012, 3, 97-110.	2.8	49
28	Micro T evaluation of several glide path techniques and ProTaper Next shaping outcomes in maxillary first molar curved canals. International Endodontic Journal, 2017, 50, 387-397.	5.0	49
29	Hierarchical porosity in real quasicrystals. Philosophical Magazine Letters, 1998, 78, 159-167.	1.2	48
30	High resolution X-ray microtomography-based CFD simulation for the characterization of flow permeability and effective thermal conductivity of aluminum metal foams. Experimental Thermal and Fluid Science, 2015, 67, 30-36.	2.7	47
31	The contribution of synchrotron X-ray computed microtomography to understanding volcanic processes. Journal of Synchrotron Radiation, 2010, 17, 215-221.	2.4	44
32	DID NEANDERTHALS PLAY MUSIC? Xâ€RAY COMPUTED MICROâ€TOMOGRAPHY OF THE DIVJE BABE â€~FLUTEâ€ Archaeometry, 2012, 54, 581-590.	™* 1.3	41
33	Focusing X-rays with simple arrays of prism-like structures. Journal of Synchrotron Radiation, 2004, 11, 248-253.	2.4	39
34	Imaging Techniques for the Study of Food Microstructure: A Review. Advances in Food and Nutrition Research, 2006, 51, 205-263.	3.0	39
35	A detailed study of gold-nanoparticle loaded cells using X-ray based techniques for cell-tracking applications with single-cell sensitivity. Nanoscale, 2013, 5, 3337.	5.6	39
36	Near-liquidus growth of feldspar spherulites in trachytic melts: 3D morphologies and implications in crystallization mechanisms. Lithos, 2015, 216-217, 93-105.	1.4	39

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37	3D Pore-network quantitative analysis in deformed carbonate grainstones. Marine and Petroleum Geology, 2017, 82, 251-264.	3.3	39
38	Brief communication: Two human fossil deciduous molars from the sangiran dome (Java, Indonesia): Outer and inner morphology. American Journal of Physical Anthropology, 2012, 147, 472-481.	2.1	37
39	New Features of Dislocation Images in Third-Generation Synchrotron Radiation Topographs. Journal of Synchrotron Radiation, 1996, 3, 173-184.	2.4	36
40	Fluid flow simulation and permeability computation in deformed porous carbonate grainstones. Advances in Water Resources, 2018, 115, 95-111.	3.8	35
41	The Middle Pleistocene (MIS 12) human dental remains from Fontana Ranuccio (Latium) and Visogliano (Friuli-Venezia Giulia), Italy. A comparative high resolution endostructural assessment. PLoS ONE, 2018, 13, e0189773.	2.5	35
42	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
43	Inner tooth morphology of Homo erectus from Zhoukoudian. New evidence from an old collection housed at Uppsala University, Sweden. Journal of Human Evolution, 2018, 116, 1-13.	2.6	32
44	Degassing behaviour of vesiculated basaltic magmas: an example from Ambrym volcano, Vanuatu Arc. Journal of Volcanology and Geothermal Research, 2012, 233-234, 55-64.	2.1	31
45	Solidification and Turbulence (Non-laminar) during Magma Ascent: Insights from 2D and 3D Analyses of Bubbles and Minerals in an Etnean Dyke. Journal of Petrology, 2017, 58, 1511-1533.	2.8	31
46	Plagioclase nucleation and growth kinetics in a hydrous basaltic melt by decompression experiments. Contributions To Mineralogy and Petrology, 2015, 170, 1.	3.1	29
47	Using synchrotron X-ray microtomography to characterize the pore network of reservoir rocks: A case study on carbonates. Advances in Water Resources, 2016, 95, 254-263.	3.8	29
48	<title>X-ray optics and imaging with hard coherent synchrotron radiation</title> . , 1997, , .		27
49	Evaluation of Microstructural Properties of Coffee Beans by Synchrotron Xâ€Ray Microtomography: A Methodological Approach. Journal of Food Science, 2011, 76, E222-31.	3.1	26
50	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
51	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. Journal of Controlled Release, 2012, 158, 393-402.	9.9	26
52	The Grizzly Lake complex (Yellowstone Volcano, USA): Mixing between basalt and rhyolite unraveled by microanalysis and X-ray microtomography. Lithos, 2016, 260, 457-474.	1.4	26
53	Coherent X-ray diffraction and phason fluctuations in quasicrystals. Europhysics Letters, 2001, 54, 753-759.	2.0	25
54	Virtual histological assessment of the prenatal life history and age at death of the Upper Paleolithic fetus from Ostuni (Italy). Scientific Reports, 2017, 7, 9427.	3.3	25

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55	Investigation of the osteitis deformans phases in snake vertebrae by double-pulse laser-induced breakdown spectroscopy. Analytical and Bioanalytical Chemistry, 2010, 398, 1095-1107.	3.7	22
56	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. Journal of Structural Geology, 2014, 63, 91-105.	2.3	21
57	Synchrotron X-ray computed microtomography investigation of a mortar affected by alkali–silica reaction: a quantitative characterization of its microstructural features. Journal of Materials Science, 2011, 46, 6633-6641.	3.7	20
58	A novel protocol for resolving feldspar crystals in synchrotron X-ray microtomographic images of crystallized natural magmas and synthetic analogs. American Mineralogist, 2016, 101, 2301-2311.	1.9	20
59	A 3D imaging textural characterization of pyroclastic products from the 1538 AD Monte Nuovo eruption (Campi Flegrei, Italy). Lithos, 2019, 340-341, 316-331.	1.4	20
60	Mineral inclusions are not immutable: Evidence of post-entrapment thermally-induced shape change of quartz in garnet. Earth and Planetary Science Letters, 2021, 555, 116708.	4.4	20
61	Phonon- and phason-type spherical inclusions in icosahedral quasicrystals. Journal of Physics Condensed Matter, 2003, 15, L363-L370.	1.8	19
62	An investigation of mortars affected by alkali-silica reaction by X-ray synchrotron microtomography: a preliminary study. Journal of Materials Science, 2009, 44, 5815-5823.	3.7	19
63	First 3D imaging characterization of Pele's hair from Kilauea volcano (Hawaii). Scientific Reports, 2019, 9, 1711.	3.3	18
64	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
65	Production and detachment of oxide crystal shells on bubble walls during experimental vesiculation of andesitic magmas. Contributions To Mineralogy and Petrology, 2019, 174, 1.	3.1	17
66	Morphological Evolution of Zn-Sponge Electrodes Monitored by In Situ X-ray Computed Microtomography. ACS Applied Energy Materials, 2020, 3, 4931-4940.	5.1	17
67	Structural microanalysis with synchrotron radiation: archaeometric applications at Elettra. Journal of Neutron Research, 2006, 14, 75-79.	1.1	16
68	Permeability measurements of Campi Flegrei pyroclastic products: An example from the Campanian Ignimbrite and Monte Nuovo eruptions. Journal of Volcanology and Geothermal Research, 2014, 272, 16-22.	2.1	16
69	Analysis of Intracellular Magnesium and Mineral Depositions during Osteogenic Commitment of 3D Cultured Saos2 Cells. International Journal of Molecular Sciences, 2020, 21, 2368.	4.1	16
70	A combined synchrotron radiation micro computed tomography and micro X-ray diffraction study on deleterious alkali-silica reaction. Journal of Materials Science, 2015, 50, 7985-7997.	3.7	15
71	Synthetic calcium carbonate improves the effectiveness of treatments with nanolime to contrast decay in highly porous limestone. Scientific Reports, 2019, 9, 15278.	3.3	15
72	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). Frontiers in Earth Science, 2019, 7, .	1.8	15

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73	Implementation of Dynamic Neutron Radiography and Integrated X-Ray and Neutron Tomography in Porous Carbonate Reservoir Rocks. Frontiers in Earth Science, 2019, 7, .	1.8	15
74	3D microstructure of magnesium potassium phosphate ceramics from X-ray tomography: new insights into the reaction mechanisms. Journal of Materials Science, 2019, 54, 3748-3760.	3.7	15
75	Pore-scale dual-porosity and dual-permeability modeling in an exposed multi-facies porous carbonate reservoir. Marine and Petroleum Geology, 2021, 128, 105004.	3.3	15
76	Bone diagenesis in archaeological and contemporary human remains: an investigation of bone 3D microstructure and minero-chemical assessment. Archaeological and Anthropological Sciences, 2020, 12, 1.	1.8	14
77	Influence of aggregate mineralogy on alkali–silica reaction studied by X-ray powder diffraction and imaging techniques. Journal of Materials Science, 2012, 47, 2845-2855.	3.7	13
78	Microstructural characterization of dental zinc phosphate cements using combined small angle neutron scattering and microfocus X-ray computed tomography. Dental Materials, 2017, 33, 402-417.	3.5	13
79	Exploring Hominin and Non-hominin Primate Dental Fossil Remains with Neutron Microtomography. Physics Procedia, 2017, 88, 109-115.	1.2	13
80	Green, grey and black: A comparative study of Sierra de las Navajas (Mexico) and Lipari (Italy) obsidians. Quaternary International, 2018, 467, 369-390.	1.5	13
81	Microstructural evolution and texture analysis of magnesium phosphate cement. Journal of the American Ceramic Society, 2020, 103, 1414-1424.	3.8	12
82	Three-dimensional analysis of the canal network of an Indonesian Stylaster (Cnidaria, Hydrozoa,) Tj ETQq0 0 0 rg	BT /Overlc 0.8	ock 10 Tf 50 3
83	Electrochemical reconstruction of a heavily corroded Tarentum hemiobolus silver coin: a study based on microfocus X-ray computed microtomography. Journal of Archaeological Science, 2014, 52, 24-30.	2.4	11
84	Quantitative 3D microstructural analysis of naturally deformed amphibolite from the Southern Alps (Italy): microstructures, CPO and seismic anisotropy from a fossil extensional margin. Geological Society Special Publication, 2015, 409, 201-222.	1.3	11
85	Deep sea explosive eruptions may be not so different from subaerial eruptions. Scientific Reports, 2020, 10, 6709.	3.3	11
86	An infant burial from Arma Veirana in northwestern Italy provides insights into funerary practices and female personhood in early Mesolithic Europe. Scientific Reports, 2021, 11, 23735.	3.3	11
87	Detecting microdiamonds in kimberlite drill-hole cores by computed tomography. International Journal of Mineral Processing, 2005, 75, 173-188.	2.6	10
88	An Innovative CCD-Based High-Resolution CT System for Analysis of Trabecular Bone Tissue. IEEE Transactions on Nuclear Science, 2006, 53, 2584-2590.	2.0	10
89	Three-dimensional distribution of primary melt inclusions in garnets by X-ray microtomography. American Mineralogist, 2018, 103, 911-926.	1.9	10
90	In Situ and Ex Situ X-Ray Microspectroelectrochemical Methods for the Study of Zinc–Air Batteries. , 2018, , 174-194.		8

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91	Halloysite nanotubes/pluronic nanocomposites for waterlogged archeological wood: thermal stability and X-ray microtomography. Journal of Thermal Analysis and Calorimetry, 2020, 141, 981-989.	3.6	8
92	Growth of Neanderthal infants from Krapina (120–130 ka), Croatia. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20212079.	2.6	8
93	Heterogeneous vesiculation of 2011 El Hierro xeno-pumice revealed by X-ray computed microtomography. Bulletin of Volcanology, 2016, 78, 1.	3.0	7
94	A quantitative analysis of 3D-cell distribution in regenerative muscle-skeletal system with synchrotron X-ray computed microtomography. Scientific Reports, 2018, 8, 14145.	3.3	7
95	The Skaros effusive sequence at Santorini (Greece): Petrological and geochemical constraints on an interplinian cycle. Lithos, 2020, 362-363, 105504.	1.4	7
96	Investigation of nano-microstructural changes in Maastricht limestone after treatment with nanolime suspension. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	7
97	Diagenesis of juvenile skeletal remains: A multimodal and multiscale approach to examine the post-mortem decay of children's bones. Journal of Archaeological Science, 2021, 135, 105477.	2.4	7
98	Dental cementum virtual histology of Neanderthal teeth from Krapina (Croatia, 130–120 kyr): an informed estimate of age, sex and adult stressors. Journal of the Royal Society Interface, 2022, 19, 20210820.	3.4	7
99	Microtomography-based CFD Analysis of Transport in Open-Cell Aluminum Metal Foams. Journal of Physics: Conference Series, 2014, 501, 012021.	0.4	6
100	Studying model suspensions using high resolution synchrotron X-ray microtomography. Chemical Engineering Research and Design, 2017, 117, 756-772.	5.6	6
101	About a method for compressing x-ray computed microtomography data. Measurement Science and Technology, 2018, 29, 044002.	2.6	6
102	A compact and flexible induction furnace for <i>in situ</i> X-ray microradiograhy and computed microtomography at Elettra: design, characterization and first tests. Journal of Synchrotron Radiation, 2018, 25, 1172-1181.	2.4	6
103	The importance of pore throats in controlling the permeability of magmatic foams. Bulletin of Volcanology, 2019, 81, 1.	3.0	6
104	3D X-rayÂtomographic analysis reveals how coesite is preserved in Muong Nong-type tektites. Scientific Reports, 2020, 10, 20608.	3.3	6
105	3D-localisation of cochlear implant electrode contacts in relation to anatomical structures from in vivo cone-beam computed tomography. Hearing Research, 2022, 426, 108537.	2.0	6
106	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
107	Extended investigation of porosity in quasicrystals by synchrotron X-ray phase contrast radiography—I: In icosahedral AIPdMn grains. Journal of Crystal Growth, 2005, 281, 623-638.	1.5	5
108	Enhanced contrast in Xâ€ray microtomographic images of the membranous labyrinth using different Xâ€ray sources and scanning modes. Journal of Anatomy, 2018, 233, 770-782.	1.5	5

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109	Quantitative evaluation of bone-mineral density loss using X-ray coherent scattering. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 318-321.	1.6	4
110	Garnets from Val d'Ala Rodingites, Piedmont, Italy: An Investigation of Their Gemological, Spectroscopic and Crystal Chemical Properties. Minerals (Basel, Switzerland), 2019, 9, 728.	2.0	4
111	Insight into the Cycling Behaviour of Metal Anodes, Enabled by Xâ€ray Tomography and Mathematical Modelling. ChemElectroChem, 2022, 9, .	3.4	4
112	Tracing the mobility of a Late Epigravettian (~ 13Âka) male infant from Grotte di Pradis (Northeastern) Tj ET	Qq0.0 0 rg	gBT_/Overlock
113	Micro-ATR FTIR, SEM-EDS, and X-ray Micro-CT: An Innovative Multitechnique Approach to Investigate Bone Affected by Peri-implantitis. International Journal of Oral and Maxillofacial Implants, 2019, 34, 631-641.	1.4	3
114	X-ray computed microtomography of Megachirella wachtleri. Scientific Data, 2018, 5, 180244.	5.3	3
115	Advanced x-ray tomography: experiment, modeling, and algorithms. Measurement Science and Technology, 2018, 29, 080101.	2.6	2
116	Editorial: Recent Advancements in X-Ray and Neutron Imaging of Dynamic Processes in Earth Sciences. Frontiers in Earth Science, 2020, 8, .	1.8	2
117	Analysis of a SiCf/SiC sample under in situ loading by synchrotron x-ray radiation. AIP Conference Proceedings, 2021, , .	0.4	2
118	Synchrotron radiation X-ray microtomography for the visualization of intra-cochlear anatomy in human temporal bones implanted with a perimodiolar cochlear implant electrode array. Journal of Synchrotron Radiation, 2021, 28, 327-332.	2.4	2
119	Living in darkness: Exploring adaptation of <i>Proteus anguinus</i> in 3 dimensions by X-ray imaging. GigaScience, 2022, 11, .	6.4	2
120	New evaluation of the Castel di Guido 'hyoid'. Journal of Anthropological Sciences, 2016, 94, 231-5.	0.4	2
121	Reflection on multilayer mirrors: beam profile and coherence properties. Proceedings of SPIE, 2014, , .	0.8	1
122	Modeling the failure of magmatic foams with application to Stromboli volcano, Italy. Earth and Planetary Science Letters, 2014, 403, 246-253.	4.4	1
123	Effect of the Nano-Ca(OH)2 Addition on the Portland Clinker Cooking Efficiency. Materials, 2019, 12, 1787.	2.9	1
124	Virtual histology of archaeological human deciduous prenatal enamel through synchrotron X-ray computed microtomography images. Journal of Synchrotron Radiation, 2022, 29, 247-253.	2.4	1

126 Focusing hard x-rays with large kinoform lenses of mm size. , 2004, , .

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127	CLESSIDRA: Focusing Hard X-Rays Efficiently with Arrays Composed of Small Prisms. AIP Conference Proceedings, 2007, , .	0.4	0
128	Detection of lead in <i>Zea mays</i> by dualâ€energy Xâ€ray microtomography at the SYRMEP beamline of the ELETTRA synchrotron and by atomic absorption spectroscopy. Microscopy Research and Technique, 2010, 73, 638-649.	2.2	0
129	Three-dimensional distribution of primary melt inclusions in garnets by X-ray microtomography. American Mineralogist, 2018, 103, 911-926.	1.9	0
130	The Use of Synchrotron-Based X-ray Microtomography for the Pore Network Quantitative and Computational Fluid Dynamics Experiments on Porous Carbonate Rocks. Springer Proceedings in Physics, 2021, , 203-217.	0.2	0
131	Directional differences in head stabilisation in Acanthodactylus pardalis lizards. Journal of Biomechanics, 2021, 121, 110418.	2.1	0
132	3D MODELLING AND FLUID FLOW SIMULATION WITHIN DEFORMATION BANDS IN CARBONATE GRAINSTONES. , 2016, , .		0
133	CO2 storage in the northern Victoria Land (Antarctica) SCLM: clues from fluid inclusions, mineral chemistry and X-ray microtomography. , 2021, , .		0
134	Some examples of X-ray micro-computed tomography applied to mantle petrology , 2021, , .		0
135	Deep Sea Explosive Eruptions may be not so Different from Subaerial Eruptions. , 2020, , .		0
136	Thermally-Induced Shape Maturation of Quartz in Garnet. , 2020, , .		0