

Hugues Leroux

List of Publications by Year in descending order

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107
papers

5,604
citations

109321

35
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79698

73
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all docs

107
docs citations

107
times ranked

3824
citing authors

#	ARTICLE	IF	CITATIONS
1	Geometry induced bias in the remote near-IR identification of phyllosilicates on space weathered bodies. <i>Icarus</i> , 2022, 376, 114887.	2.5	3
2	Impact dynamics of the L chondrites' parent asteroid. <i>Meteoritics and Planetary Science</i> , 2022, 57, 759-775.	1.6	1
3	STEM-EELS Investigation of Planar Defects in Olivine in the Allende Meteorite. <i>Minerals (Basel)</i> , 2021, 11, 1078.	1.4	5
4	Characterization of shocked quartz grains from Chicxulub peak ring granites and shock pressure estimates. <i>Meteoritics and Planetary Science</i> , 2020, 55, 2206-2223.	1.6	12
5	Space Weathering Affects the Remote Near-IR Identification of Phyllosilicates. <i>Planetary Science Journal</i> , 2020, 1, 61.	3.6	11
6	A TEM study of exsolution in Ca-rich pyroxenes from the Paris and Renazzo chondrites: Determination of type I chondrule cooling rates. <i>Meteoritics and Planetary Science</i> , 2018, 53, 482-492.	1.6	2
7	Low temperature MIR to submillimeter mass absorption coefficient of interstellar dust analogues. <i>Astronomy and Astrophysics</i> , 2017, 600, A123.	5.1	48
8	Low-temperature MIR to submillimeter mass absorption coefficient of interstellar dust analogues. <i>Astronomy and Astrophysics</i> , 2017, 606, A50.	5.1	41
9	Regolith breccia Northwest Africa 7533: Mineralogy and petrology with implications for early Mars. <i>Meteoritics and Planetary Science</i> , 2017, 52, 89-124.	1.6	43
10	EXPERIMENTAL INVESTIGATION OF IRRADIATION-DRIVEN HYDROGEN ISOTOPE FRACTIONATION IN ANALOGS OF PROTOPLANETARY HYDROUS SILICATE DUST. <i>Astrophysical Journal</i> , 2016, 832, 55.	4.5	8
11	Variations in cometary dust composition from Giotto to Rosetta, clues to their formation mechanisms. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S323-S330.	4.4	28
12	Amorphous silicate nanoparticles with controlled Fe-Mg pyroxene compositions. <i>Journal of Non-Crystalline Solids</i> , 2016, 447, 255-261.	3.1	4
13	Exsolution and shock microstructures of igneous pyroxene clasts in the Northwest Africa 7533 Martian meteorite. <i>Meteoritics and Planetary Science</i> , 2016, 51, 932-945.	1.6	13
14	The deuterium/hydrogen distribution in chondritic organic matter attests to early ionizing irradiation. <i>Nature Communications</i> , 2015, 6, 8567.	12.8	30
15	Fe-Mg interdiffusion profiles in rimmed forsterite grains in the Allende matrix: Time-temperature constraints for the parent body metamorphism. <i>Meteoritics and Planetary Science</i> , 2015, 50, 1529-1545.	1.6	12
16	Nickeliferous pyrite tracks pervasive hydrothermal alteration in Martian regolith breccia: A study in NWA 7533. <i>Meteoritics and Planetary Science</i> , 2015, 50, 2099-2120.	1.6	32
17	The asteroid-comet continuum from laboratory and space analyses of comet samples and micrometeorites. <i>Proceedings of the International Astronomical Union</i> , 2015, 11, 253-256.	0.0	2
18	Impact origin for the Hummeln structure (Sweden) and its link to the Ordovician disruption of the L chondrite parent body. <i>Geology</i> , 2015, 43, 279-282.	4.4	17

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19	Formation and transformations of Fe-rich serpentines by asteroidal aqueous alteration processes: A nanoscale study of the Murray chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 158, 162-178.	3.9	18
20	A SIGNIFICANT AMOUNT OF CRYSTALLINE SILICA IN RETURNED COMETARY SAMPLES: BRIDGING THE GAP BETWEEN ASTROPHYSICAL AND METEORITICAL OBSERVATIONS. <i>Astrophysical Journal Letters</i> , 2015, 801, L7.	8.3	7
21	GEMS-like material in the matrix of the Paris meteorite and the early stages of alteration of CM chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 170, 247-265.	3.9	96
22	Stardust Interstellar Preliminary Examination X: Impact speeds and directions of interstellar grains on the Stardust dust collector. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1680-1697.	1.6	24
23	Stardust Interstellar Preliminary Examination <sc>IX</sc>: High-speed interstellar dust analog capture in Stardust flight-â€špare aerogel. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1666-1679.	1.6	19
24	Stardust Interstellar Preliminary Examination <sc>XI</sc>: Identification and elemental analysis of impact craters on Al foils from the Stardust Interstellar Dust Collector. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1698-1719.	1.6	16
25	Stardust Interstellar Preliminary Examination VIII: Identification of crystalline material in two interstellar candidates. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1645-1665.	1.6	12
26	Stardust Interstellar Preliminary Examination <sc>VII</sc>: Synchrotron Xâ€šray fluorescence analysis of six Stardust interstellar candidates measured with the Advanced Photon Source 2â€šâ€š microprobe. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1626-1644.	1.6	13
27	Stardust Interstellar Preliminary Examination <sc>VI</sc>: Quantitative elemental analysis by synchrotron Xâ€šray fluorescence nanoimaging of eight impact features in aerogel. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1612-1625.	1.6	12
28	The Paris meteorite, the least altered CM chondrite so far. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 124, 190-222.	3.9	163
29	Stardust Interstellar Preliminary Examination V: <sc>XRF</sc> analyses of interstellar dust candidates at <sc>ESRF ID</sc>13. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1594-1611.	1.6	12
30	Final reports of the Stardust Interstellar Preliminary Examination. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1720-1733.	1.6	29
31	Stardust Interstellar Preliminary Examination <sc>II</sc>: Curating the interstellar dust collector, picrokeystones, and sources of impact tracks. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1522-1547.	1.6	18
32	Stardust Interstellar Preliminary Examination <sc>III</sc>: Infrared spectroscopic analysis of interstellar dust candidates. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1548-1561.	1.6	12
33	Stardust Interstellar Preliminary Examination I: Identification of tracks in aerogel. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1509-1521.	1.6	16
34	Stardust Interstellar Preliminary Examination <sc>IV</sc>: Scanning transmission Xâ€šray microscopy analyses of impact features in the Stardust Interstellar Dust Collector. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1562-1593.	1.6	18
35	Isotopic and structural signature of experimentally irradiated organic matter. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 142, 522-534.	3.9	19
36	Evidence for interstellar origin of seven dust particles collected by the Stardust spacecraft. <i>Science</i> , 2014, 345, 786-791.	12.6	152

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37	Iron valence state of fine-grained material from the Jupiter family comet 81P/Wild 2 – A coordinated TEM/STEM EDS/STXM study. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 122, 1-16.	3.9	17
38	Ordering state in orthopyroxene as determined by precession electron diffraction. <i>American Mineralogist</i> , 2013, 98, 1526-1534.	1.9	7
39	Amorphization and D/H fractionation of kerogens during experimental electron irradiation: Comparison with chondritic organic matter. <i>Icarus</i> , 2013, 226, 101-110.	2.5	39
40	Incorporation of Zn in the destabilization products of muscovite at 1175 ÅC under disequilibrium conditions, and implications for heavy metal sequestration. <i>American Mineralogist</i> , 2013, 98, 932-945.	1.9	0
41	Fine-grained material encased in microtracks of Stardust samples. <i>Meteoritics and Planetary Science</i> , 2013, 48, 1607-1617.	1.6	7
42	Transmission Electron Microscopy of CONCORDIA UltraCarbonaceous Antarctic MicroMeteorites (UCAMMs): Mineralogical properties. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 76, 68-82.	3.9	78
43	Mineralogy and petrology of Stardust particles encased in the bulb of track 80: TEM investigation of the Wild 2 fine-grained material. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 87, 35-50.	3.9	36
44	Microstructure modifications of silicates induced by the collection in aerogel: Experimental approach and comparison with Stardust results. <i>Meteoritics and Planetary Science</i> , 2012, 47, 696-707.	1.6	8
45	Fine-grained material of 81P/Wild 2 in interaction with the Stardust aerogel. <i>Meteoritics and Planetary Science</i> , 2012, 47, 613-622.	1.6	14
46	Magnetic microstructures of metal grains in equilibrated ordinary chondrites and implications for paleomagnetism of meteorites. <i>Earth and Planetary Science Letters</i> , 2011, 306, 241-252.	4.4	55
47	Crystallization of amorphous silicates far from equilibrium part II: Experimental insight into the key role of decoupled cation mobilities. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 3467-3473.	3.1	4
48	Crystallization of amorphous silicates far from equilibrium part I: A versatile nitrate-based sol-gel synthesis of amorphous porous Ca,Mg-rich silicates. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 3461-3466.	3.1	5
49	Hydroxyl radical production and storage in analogues of amorphous interstellar silicates: a possible wet-accretion phase for inner telluric planets. <i>Astronomy and Astrophysics</i> , 2011, 531, A96.	5.1	20
50	Low-temperature FIR and submillimetre mass absorption coefficient of interstellar silicate dust analogues. <i>Astronomy and Astrophysics</i> , 2011, 535, A124.	5.1	82
51	A sharp change in the mineralogy of annealed protoplanetary dust at the glass transition temperature. <i>Astronomy and Astrophysics</i> , 2011, 529, A111.	5.1	19
52	Petrogenesis of mineral micro-inclusions in an uncommon carbonado. <i>European Journal of Mineralogy</i> , 2011, 23, 721-729.	1.3	11
53	Comet 81P/Wild 2: The size distribution of finer ($sub{10}^{1/4}m$) dust collected by the Stardust spacecraft. <i>Meteoritics and Planetary Science</i> , 2010, 45, 1409-1428.	1.6	76
54	Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow. <i>Science</i> , 2010, 328, 742-745.	12.6	160

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55	Dust modification under photon, electron and ion irradiation. EAS Publications Series, 2009, 35, 153-169.	0.3	2
56	Pristine extraterrestrial material with unprecedented nitrogen isotopic variation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10522-10527.	7.1	72
57	Oxidation state of iron and extensive redistribution of sulfur in thermally modified Stardust particles. Geochimica Et Cosmochimica Acta, 2009, 73, 767-777.	3.9	29
58	SURFACE TEMPERATURE OF PROTOPLANETARY DISKS PROBED BY ANNEALING EXPERIMENTS REFLECTING <i>SPITZER</i> OBSERVATIONS. Astrophysical Journal, 2009, 707, L174-L178.	4.5	15
59	Pyroxenes microstructure in comet 81P/Wild 2 terminal Stardust particles. Meteoritics and Planetary Science, 2009, 44, 1475-1488.	1.6	27
60	A TEM study of four particles extracted from the Stardust track 80. Meteoritics and Planetary Science, 2009, 44, 1511-1518.	1.6	17
61	Thermal history, partial preservation and sampling bias recorded by Stardust cometary grains during their capture. Earth and Planetary Science Letters, 2008, 273, 195-202.	4.4	32
62	A TEM study of thermally modified comet 81P/Wild 2 dust particles by interactions with the aerogel matrix during the Stardust capture process. Meteoritics and Planetary Science, 2008, 43, 97-120.	1.6	73
63	Origin and formation of iron silicide phases in the aerogel of the Stardust mission. Meteoritics and Planetary Science, 2008, 43, 121-134.	1.6	45
64	Transmission electron microscopy of cometary residues from micron-sized craters in the Stardust Al foils. Meteoritics and Planetary Science, 2008, 43, 143-160.	1.6	34
65	Comparing Wild 2 particles to chondrites and IDPs. Meteoritics and Planetary Science, 2008, 43, 261-272.	1.6	136
66	Discovery of non-random spatial distribution of impacts in the Stardust cometary collector. Meteoritics and Planetary Science, 2008, 43, 415-429.	1.6	15
67	Igneous Ca-rich pyroxene in comet 81P/Wild 2. American Mineralogist, 2008, 93, 1933-1936.	1.9	25
68	Chemical and morphological evolution of a silicate surface under low-energy ion irradiation. Astronomy and Astrophysics, 2008, 482, 541-548.	5.1	64
69	Investigations on crystalline interface within a molecular composite crystal by microscopic techniques. Journal of Materials Chemistry, 2007, 17, 1559-1562.	6.7	31
70	Ferromagnetic inclusions in silicate thin films: insights into the magnetic properties of cosmic grains. Astronomy and Astrophysics, 2007, 468, L9-L12.	5.1	9
71	Impact Features on Stardust: Implications for Comet 81P/Wild 2 Dust. Science, 2006, 314, 1716-1719.	12.6	286
72	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848

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73	Elemental Compositions of Comet 81P/Wild 2 Samples Collected by Stardust. <i>Science</i> , 2006, 314, 1731-1735.	12.6	200
74	Mineralogy and Petrology of Comet 81P/Wild 2 Nucleus Samples. <i>Science</i> , 2006, 314, 1735-1739.	12.6	589
75	Microstructural study of micron-sized craters simulating Stardust impacts in aluminum 1100 targets. <i>Meteoritics and Planetary Science</i> , 2006, 41, 181-196.	1.6	8
76	Magmatic cristobalite and quartz in the NWA 856 Martian meteorite. <i>Meteoritics and Planetary Science</i> , 2006, 41, 913-923.	1.6	19
77	Structural and compositional modifications of fayalite Fe ₂ SiO ₄ under electron irradiation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006, 243, 371-376.	1.4	13
78	The origin of GEMS in IDPs as deduced from microstructural evolution of amorphous silicates with annealing. <i>Astronomy and Astrophysics</i> , 2006, 448, L1-L4.	5.1	48
79	First determination of the (re)crystallization activation energy of an irradiated olivine-type silicate. <i>Astronomy and Astrophysics</i> , 2005, 440, 179-184.	5.1	24
80	Weathering features in shocked quartz from the Ries impact crater, Germany. <i>Meteoritics and Planetary Science</i> , 2005, 40, 1347-1352.	1.6	12
81	IR spectroscopic study of olivine, enstatite and diopside irradiated with low energy H ⁺ and He ⁺ ions. <i>Astronomy and Astrophysics</i> , 2004, 420, 233-243.	5.1	45
82	Pyroxene microstructure in the Northwest Africa 856 martian meteorite. <i>Meteoritics and Planetary Science</i> , 2004, 39, 711-722.	1.6	16
83	Phase separation in metamict zircon under electron irradiation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 211, 549-555.	1.4	12
84	Experimental study and TEM characterization of dusty olivines in chondrites: Evidence for formation by in situ reduction. <i>Meteoritics and Planetary Science</i> , 2003, 38, 81-94.	1.6	53
85	Shocked and thermally metamorphosed zircon from the Vredefort impact structure, South Africa: a transmission electron microscopic study. <i>European Journal of Mineralogy</i> , 2002, 14, 859-868.	1.3	43
86	Low-energy helium ion irradiation-induced amorphization and chemical changes in olivine: Insights for silicate dust evolution in the interstellar medium. <i>Meteoritics and Planetary Science</i> , 2002, 37, 1599-1614.	1.6	106
87	Low-temperature crystallization of MgSiO ₃ glasses under electron irradiation: Possible implications for silicate dust evolution in circumstellar environments. <i>Meteoritics and Planetary Science</i> , 2002, 37, 1615-1622.	1.6	34
88	Microstructural shock signatures of major minerals in meteorites. <i>European Journal of Mineralogy</i> , 2001, 13, 253-272.	1.3	52
89	An experimental study of the external reduction of olivine single crystals. <i>American Mineralogist</i> , 2001, 86, 47-54.	1.9	11
90	Metamictization of zircon: Raman spectroscopic study. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 1915-1925.	1.8	163

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91	A TEM investigation of natural metamict zircons: structure and recovery of amorphous domains. <i>Physics and Chemistry of Minerals</i> , 2000, 27, 545-556.	0.8	71
92	Metal-silicate interaction in quenched shock-induced melt of the Tenham L6-chondrite. <i>Earth and Planetary Science Letters</i> , 2000, 179, 477-487.	4.4	31
93	Microstructures of metal grains in ordinary chondrites: Implications for their thermal histories. <i>Meteoritics and Planetary Science</i> , 2000, 35, 569-580.	1.6	22
94	Annealing of alpha-decay damage in zircon: a Raman spectroscopic study. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 3131-3148.	1.8	102
95	Experimental shock deformation in zircon: a transmission electron microscopic study. <i>Earth and Planetary Science Letters</i> , 1999, 169, 291-301.	4.4	160
96	An analytical electron microscope investigation of some pallasites. <i>Physics of the Earth and Planetary Interiors</i> , 1997, 103, 101-115.	1.9	13
97	A transmission electron microscope investigation of shock metamorphism in olivine of the Ilafegh 013 chondrite. <i>Meteoritics and Planetary Science</i> , 1997, 32, 309-316.	1.6	10
98	An analytical electron microscopy (AEM) investigation of opaque inclusions in some type 6 ordinary chondrites. <i>Meteoritics and Planetary Science</i> , 1996, 31, 767-776.	1.6	21
99	A transmission electron microscopy (TEM) investigation of opaque phases in shocked chondrites. <i>Meteoritics and Planetary Science</i> , 1996, 31, 305-312.	1.6	7
100	A transmission electron microscope study of shocked quartz from the Manson impact structure. , 1996, , .		8
101	Shocked quartz in the Alamo breccia, southern Nevada: Evidence for a Devonian impact event. <i>Geology</i> , 1995, 23, 1003.	4.4	47
102	The K/T boundary at Beloc (Haiti): Compared stratigraphic distributions of the boundary markers. <i>Earth and Planetary Science Letters</i> , 1995, 131, 255-268.	4.4	30
103	Microstructural defects in experimentally shocked diopside: A TEM characterization. <i>Physics and Chemistry of Minerals</i> , 1994, 20, 521-530.	0.8	30
104	A TEM investigation of shock metamorphism in quartz from the Vredefort dome, South Africa. <i>Tectonophysics</i> , 1994, 230, 223-239.	2.2	117
105	Dynamic deformation of quartz in the landslide of Kofels, Austria. <i>European Journal of Mineralogy</i> , 1993, 5, 893-902.	1.3	11
106	Formation mechanisms of planar deformation features in naturally shocked quartz. <i>Physics of the Earth and Planetary Interiors</i> , 1992, 74, 219-240.	1.9	106
107	Energy dispersive X-ray microanalysis by TEM applied to extraterrestrial materials. , 0, , 49-66.		4