

Maik Lang

List of Publications by Year in descending order

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72
papers

2,531
citations

147801

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docs citations

73
times ranked

1701
citing authors

#	ARTICLE	IF	CITATIONS
1	Local ordering in disordered Nd Zr _{1-O2-0.5} pyrochlore as observed using neutron total scattering. Acta Materialia, 2022, 225, 117590.	7.9	4
2	Radiation-induced modifications in copper oxide growth. Journal of Radioanalytical and Nuclear Chemistry, 2021, 327, 123-131.	1.5	0
3	Radiation damage and thermal annealing in tunnel structured hollandite materials. Acta Materialia, 2021, 206, 116598.	7.9	5
4	Review of Swift Heavy Ion Irradiation Effects in CeO ₂ . Quantum Beam Science, 2021, 5, 19.	1.2	21
5	Characterization of zirconium carbide microspheres synthesized via internal gelation. Journal of Nuclear Materials, 2021, 557, 153218.	2.7	3
6	Disorder in Ho ₂ Ti ₂ xZrxO ₇ : pyrochlore to defect fluorite solid solution series. RSC Advances, 2020, 10, 34632-34650.	3.6	31
7	Local order of orthorhombic weberite-type Y ₃ TaO ₇ as determined by neutron total scattering and density functional theory calculations. Acta Materialia, 2020, 196, 704-709.	7.9	16
8	Annealing of ion tracks in apatite under pressure characterized in situ by small angle x-ray scattering. Scientific Reports, 2020, 10, 1367.	3.3	2
9	Characterization of Radiation Effects and Ion Tracks with Spallation Neutron Probes. Nuclear Physics News, 2020, 30, 16-19.	0.4	1
10	Fundamental Phenomena and Applications of Swift Heavy Ion Irradiations. , 2020, , 485-516.		23
11	Effects of irradiation temperature on the response of CeO ₂ , ThO ₂ , and UO ₂ to highly ionizing radiation. Journal of Nuclear Materials, 2019, 525, 83-91.	2.7	15
12	Thermodynamic and structural evolution of mechanically milled and swift heavy ion irradiated Er ₂ Ti ₂ O ₇ pyrochlore. Acta Materialia, 2019, 181, 309-317.	7.9	16
13	The Effect of Heavy Ion Irradiation on the Forward Dissolution Rate of Borosilicate Glasses Studied In Situ and Real Time by Fluid-Cell Raman Spectroscopy. Materials, 2019, 12, 1480.	2.9	18
14	Radiation-induced disorder in compressed lanthanide zirconates. Physical Chemistry Chemical Physics, 2018, 20, 6187-6197.	2.8	10
15	A ₂ TiO ₅ (A = Dy, Gd, Er, Yb) at High Pressure. Inorganic Chemistry, 2018, 57, 2269-2277.	4.0	6
16	Thermodynamic and structural evolution of Dy ₂ Ti ₂ O ₇ pyrochlore after swift heavy ion irradiation. Acta Materialia, 2018, 145, 227-234.	7.9	33
17	Advanced characterization technique for mechanochemically synthesized materials: neutron total scattering analysis. Journal of Materials Science, 2018, 53, 13400-13410.	3.7	13
18	Advanced Experimental Technique for Radiation Damage Effects in Nuclear Waste Forms: Neutron Total Scattering Analysis. MRS Advances, 2018, 3, 1735-1747.	0.9	5

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19	Review of recent experimental results on the behavior of actinide-bearing oxides and related materials in extreme environments. <i>Progress in Nuclear Energy</i> , 2018, 104, 342-358.	2.9	12
20	Similar local order in disordered fluorite and aperiodic pyrochlore structures. <i>Acta Materialia</i> , 2018, 144, 60-67.	7.9	60
21	Swift-heavy ion irradiation response and annealing behavior of A ₂ TiO ₅ (A = Nd, Gd, and Yb). <i>Journal of Solid State Chemistry</i> , 2018, 258, 108-116.	2.9	10
22	A Critical Review of Existing Criteria for the Prediction of Pyrochlore Formation and Stability. <i>Inorganic Chemistry</i> , 2018, 57, 12093-12105.	4.0	78
23	Grain size effects on irradiated CeO ₂ , ThO ₂ , and UO ₂ . <i>Acta Materialia</i> , 2018, 160, 47-56.	7.9	45
24	Thermodynamics of radiation induced amorphization and thermal annealing of Dy ₂ Sn ₂ O ₇ pyrochlore. <i>Acta Materialia</i> , 2018, 155, 386-392.	7.9	17
25	Mineral Defects. <i>Encyclopedia of Earth Sciences Series</i> , 2018, , 932-936.	0.1	0
26	Structure and bulk modulus of Ln-doped UO ₂ (Ln = La, Nd) at high pressure. <i>Journal of Nuclear Materials</i> , 2017, 490, 28-33.	2.7	11
27	Amorphization of Ta ₂ O ₅ under swift heavy ion irradiation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017, 407, 25-33.	1.4	22
28	Thermal defect annealing of swift heavy ion irradiated ThO ₂ . <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017, 405, 15-21.	1.4	6
29	Defect accumulation in swift heavy ion-irradiated CeO ₂ and ThO ₂ . <i>Journal of Materials Chemistry A</i> , 2017, 5, 12193-12201.	10.3	36
30	Forging Fast Ion Conducting Nanochannels with Swift Heavy Ions: The Correlated Role of Local Electronic and Atomic Structure. <i>Journal of Physical Chemistry C</i> , 2017, 121, 975-981.	3.1	44
31	Phase transformation and chemical decomposition of nanocrystalline SnO ₂ under heavy ion irradiation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017, 407, 10-19.	1.4	0
32	Inversion in Mg _{1-x} Ni _x Al ₂ O ₄ Spinel: New Insight into Local Structure. <i>Journal of the American Chemical Society</i> , 2017, 139, 10395-10402.	13.7	50
33	Chemical ordering in substituted fluorite oxides: a computational investigation of Ho ₂ Zr ₂ O ₇ and RE ₂ Th ₂ O ₇ (RE=Ho, Y, Gd, Nd, La). <i>Scientific Reports</i> , 2016, 6, 38772.	3.3	23
34	Structural response of titanate pyrochlores to swift heavy ion irradiation. <i>Acta Materialia</i> , 2016, 117, 207-215.	7.9	64
35	Role of composition, bond covalency, and short-range order in the disordering of stannate pyrochlores by swift heavy ion irradiation. <i>Physical Review B</i> , 2016, 94, .	3.2	53
36	Mineral Defects. <i>Encyclopedia of Earth Sciences Series</i> , 2016, , 1-5.	0.1	2

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37	Insights on dramatic radial fluctuations in track formation by energetic ions. Scientific Reports, 2016, 6, 27196.	3.3	14
38	Probing disorder in isometric pyrochlore and related complex oxides. Nature Materials, 2016, 15, 507-511.	27.5	164
39	C ₆₀ and U ion irradiation of Gd ₂ Ti _x Zr _{2x} O ₇ pyrochlore. Journal of Materials Research, 2015, 30, 2456-2466.	2.6	9
40	Characterization of ion-induced radiation effects in nuclear materials using synchrotron x-ray techniques. Journal of Materials Research, 2015, 30, 1366-1379.	2.6	36
41	Phase transformations in Ln_2O_3 materials irradiated with swift heavy ions. Physical Review B, 2015, 92, .	3.2	41
42	Synchrotron x-ray diffraction analysis of gadolinium and lanthanum titanate oxides irradiated by xenon and tantalum swift heavy ions. Materials Research Society Symposia Proceedings, 2015, 1743, 26.	0.1	2
43	Redox response of actinide materials to highly ionizing radiation. Nature Communications, 2015, 6, 6133.	12.8	72
44	In situ defect annealing of swift heavy ion irradiated CeO ₂ and ThO ₂ using synchrotron X-ray diffraction and a hydrothermal diamond anvil cell. Journal of Applied Crystallography, 2015, 48, 711-717.	4.5	25
45	Response of Gd ₂ Ti ₂ O ₇ and La ₂ Ti ₂ O ₇ to swift-heavy ion irradiation and annealing. Acta Materialia, 2015, 93, 1-11.	7.9	62
46	Advances in understanding of swift heavy-ion tracks in complex ceramics. Current Opinion in Solid State and Materials Science, 2015, 19, 39-48.	11.5	66
47	Swift heavy ion track formation in Gd ₂ Zr ₂ Ti ₂ O ₇ pyrochlore: Effect of electronic energy loss. Nuclear Instruments & Methods in Physics Research B, 2014, 336, 102-115.	1.4	48
48	Defect accumulation in ThO ₂ irradiated with swift heavy ions. Nuclear Instruments & Methods in Physics Research B, 2014, 326, 169-173.	1.4	41
49	Swift heavy ion irradiation-induced amorphization of La ₂ Ti ₂ O ₇ . Nuclear Instruments & Methods in Physics Research B, 2014, 326, 145-149.	1.4	25
50	Swift heavy ion-induced phase transformation in Gd ₂ O ₃ . Nuclear Instruments & Methods in Physics Research B, 2014, 326, 121-125.	1.4	31
51	Effect of orientation on ion track formation in apatite and zircon. American Mineralogist, 2014, 99, 1127-1132.	1.9	26
52	Ion-irradiation-induced structural transitions in orthorhombic Ln ₂ TiO ₅ . Acta Materialia, 2013, 61, 4191-4199.	7.9	41
53	Effect of doping on the radiation response of conductive Nb ^δ -SrTiO ₃ . Nuclear Instruments & Methods in Physics Research B, 2013, 302, 40-47.	1.4	17
54	Multi-scale simulation of structural heterogeneity of swift-heavy ion tracks in complex oxides. Journal of Physics Condensed Matter, 2013, 25, 135001.	1.8	21

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55	Displacive radiation-induced structural contraction in nanocrystalline ZrN. Applied Physics Letters, 2012, 101, 041904.	3.3	18
56	Swift heavy ion-induced amorphization of CaZrO ₃ perovskite. Nuclear Instruments & Methods in Physics Research B, 2012, 286, 271-276.	1.4	33
57	Swift heavy ion irradiation of diamond powder. Nuclear Instruments & Methods in Physics Research B, 2012, 286, 262-265.	1.4	2
58	Structural response of A ₂ TiO ₅ (A = La, Nd, Sm, Gd) to swift heavy ion irradiation. Acta Materialia, 2012, 60, 4477-4486.	7.9	42
59	Thermal annealing of unetched fission tracks in apatite. Earth and Planetary Science Letters, 2012, 321-322, 121-127.	4.4	49
60	Amorphization of nanocrystalline monoclinic ZrO ₂ by swift heavy ion irradiation. Physical Chemistry Chemical Physics, 2012, 14, 12295.	2.8	42
61	Thermal annealing mechanisms of latent fission tracks: Apatite vs. zircon. Earth and Planetary Science Letters, 2011, 302, 227-235.	4.4	58
62	Review of A ₂ B ₂ O ₇ pyrochlore response to irradiation and pressure. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 2951-2959.	1.4	202
63	Porous fission fragment tracks in fluorapatite. Physical Review B, 2010, 82, .	3.2	22
64	Nanoscale phase transitions under extreme conditions within an ion track. Journal of Materials Research, 2010, 25, 1344-1351.	2.6	87
65	Combined high pressure and heavy-ion irradiation: a novel approach. Journal of Synchrotron Radiation, 2009, 16, 773-777.	2.4	7
66	Nanoscale manipulation of the properties of solids at high pressure with relativistic heavy ions. Nature Materials, 2009, 8, 793-797.	27.5	85
67	Liquid-like phase formation in Gd ₂ Zr ₂ O ₇ by extremely ionizing irradiation. Journal of Applied Physics, 2009, 105, .	2.5	30
68	Single-ion tracks in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mtext} \rangle \text{Gd} \langle \text{mml:mtext} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msu} \rangle$ Physical Review B, 2009, 79, .	1.2	126
69	Enhanced radiation resistance of nanocrystalline pyrochlore Gd ₂ (Ti _{0.65} Zr _{0.35}) ₂ O ₇ . Applied Physics Letters, 2009, 94, .	3.3	98
70	Irradiation-induced stabilization of zircon (ZrSiO ₄) at high pressure. Earth and Planetary Science Letters, 2008, 269, 291-295.	4.4	44
71	Fission tracks simulated by swift heavy ions at crustal pressures and temperatures. Earth and Planetary Science Letters, 2008, 274, 355-358.	4.4	40
72	Phase Transitions in Solids Stimulated by Simultaneous Exposure to High Pressure and Relativistic Heavy Ions. Physical Review Letters, 2006, 96, 195701.	7.8	51