

Jie Lian

List of Publications by Year in descending order

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128
papers

8,845
citations

76196

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40881

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all docs

129
docs citations

129
times ranked

12801
citing authors

#	ARTICLE	IF	CITATIONS
1	Cs ₃ Bi ₂ I ₉ -hydroxyapatite composite waste forms for cesium and iodine immobilization. Journal of Advanced Ceramics, 2022, 11, 712-728.	8.9	13
2	Chemical durability and degradation mechanisms of CsPbI ₃ as a potential host phase for cesium and iodine sequestration. RSC Advances, 2022, 12, 12242-12252.	1.7	4
3	Long-term interactive corrosion between International Simple Glass and stainless steel. Npj Materials Degradation, 2022, 6, .	2.6	0
4	Oxidation kinetics of SPS-densified U ₃ Si ₂ fuels—Microstructure impact. Journal of Applied Physics, 2022, 131, .	1.1	1
5	Large-Area Uniaxial-Oriented Growth of Free-Standing Thin Films at the Liquid–Air Interface with Millimeter-Sized Grains. ACS Nano, 2022, 16, 11802-11814.	7.3	1
6	Enhanced crevice corrosion of stainless steel 316 by degradation of Cr-containing hollandite crevice former. Corrosion Science, 2022, 205, 110462.	3.0	2
7	Immobilization of cesium and iodine into Cs ₃ Bi ₂ I ₉ perovskite-silica composites and core-shell waste forms with high waste loadings and chemical durability. Journal of Hazardous Materials, 2021, 401, 123279.	6.5	24
8	Multicomponent pyrochlore solid solutions with uranium incorporation – A new perspective of materials design for nuclear applications. Journal of the European Ceramic Society, 2021, 41, 2870-2882.	2.8	38
9	Microstructure Dictating Performance: Assembly of Graphene-Based Macroscopic Structures. Accounts of Materials Research, 2021, 2, 7-20.	5.9	7
10	Perovskite-Derived Cs ₂ SnCl ₆ –Silica Composites as Advanced Waste Forms for Chloride Salt Wastes. Environmental Science & Technology, 2021, 55, 7605-7614.	4.6	3
11	A systematic study of lanthanide titanates (A ₂ Ti ₂ O ₇) chemical durability: corrosion mechanisms and control parameters. Corrosion Science, 2021, 185, 109394.	3.0	13
12	Recent Advances in Corrosion Science Applicable To Disposal of High-Level Nuclear Waste. Chemical Reviews, 2021, 121, 12327-12383.	23.0	52
13	Chemical durability and surface alteration of lanthanide zirconates (A ₂ Zr ₂ O ₇ : A = La-Yb). Journal of the European Ceramic Society, 2021, 41, 6018-6028.	2.8	14
14	Kinetically Controlled Growth of Sub-Millimeter 2D Cs ₂ SnCl ₆ Nanosheets at the Liquid–Liquid Interface. Small, 2021, 17, e2006279.	5.2	14
15	Spark plasma sintering-densified vanadinite apatite-based chlorine waste forms with high thermal stability and chlorine confinement. Journal of Nuclear Materials, 2020, 528, 151857.	1.3	10
16	A high performance UV–visible dual-band photodetector based on an inorganic Cs ₂ SnCl ₆ perovskite/ZnO heterojunction structure. Journal of Materials Chemistry C, 2020, 8, 1819-1825.	2.7	29
17	Reply to: How much does corrosion of nuclear waste matrices matter. Nature Materials, 2020, 19, 962-963.	13.3	7
18	Corrosion interactions between stainless steel and lead vanado-iodoapatite nuclear waste form part I. Npj Materials Degradation, 2020, 4, .	2.6	8

#	ARTICLE	IF	CITATIONS
19	Corrosion interactions between stainless steel and lead vanado-iodoapatite nuclear waste form part II. <i>Npj Materials Degradation</i> , 2020, 4, .	2.6	7
20	Nanoscale TiO ₂ coating improves water stability of Cs ₂ SnCl ₆ . <i>MRS Communications</i> , 2020, 10, 687-694.	0.8	1
21	Degradation mechanism of lead-vanado-iodoapatite in NaCl solution. <i>Corrosion Science</i> , 2020, 172, 108720.	3.0	3
22	Ultrasensitive UV Photodetector Based on Interfacial Charge-Controlled Inorganic Perovskite/Polymer Hybrid Structure. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 43106-43114.	4.0	23
23	Self-accelerated corrosion of nuclear waste forms at material interfaces. <i>Nature Materials</i> , 2020, 19, 310-316.	13.3	61
24	Copper-Coated Reduced Graphene Oxide Fiber Mesh-Polymer Composite Films for Electromagnetic Interference Shielding. <i>ACS Applied Nano Materials</i> , 2020, 3, 5565-5574.	2.4	22
25	Effect of solution chemistry on the iodine release from iodoapatite in aqueous environments. <i>Journal of Nuclear Materials</i> , 2019, 525, 161-170.	1.3	14
26	Inorganic vacancy-ordered perovskite Cs ₂ SnCl ₆ :Bi/GaN heterojunction photodiode for narrowband, visible-blind UV detection. <i>Applied Physics Letters</i> , 2019, 115, 121106.	1.5	27
27	The grain-size effect on thermal conductivity of uranium dioxide. <i>Journal of Applied Physics</i> , 2019, 126, .	1.1	20
28	In situ Investigation of Water Interaction with Lead-Free All Inorganic Perovskite (Cs ₂ SnCl ₆ :Bi). <i>Journal of Physical Chemistry C</i> , 2019, 123, 9575-9581.	1.5	23
29	Chemical Durability and Dissolution Kinetics of Iodoapatite in Aqueous Solutions. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 452-462.	1.2	16
30	Deciphering the degradation mechanism of the lead-free all inorganic perovskite Cs ₂ SnCl ₆ . <i>Npj Materials Degradation</i> , 2019, 3, .	2.6	25
31	Nitrogen-doped highly dense but porous carbon microspheres with ultrahigh volumetric capacitance and rate capability for supercapacitors. <i>Journal of Materials Chemistry A</i> , 2019, 7, 476-485.	5.2	33
32	Microfluidics-enabled orientation and microstructure control of macroscopic graphene fibres. <i>Nature Nanotechnology</i> , 2019, 14, 168-175.	15.6	207
33	Oxygen point defect accumulation in single-phase $U_{2-x}O_{7-x}$. <i>Physical Review Materials</i> , 2019, 3, .	0.9	10
34	Thermally-Conductive and Mechanically-Robust Graphene Nanoplatelet Reinforced UO ₂ Composite Nuclear Fuels. <i>Scientific Reports</i> , 2018, 8, 2987.	1.6	19
35	Mechanism of iodine release from iodoapatite in aqueous solution. <i>RSC Advances</i> , 2018, 8, 3951-3957.	1.7	22
36	Tunable optical properties and stability of lead free all inorganic perovskites (Cs ₂ SnCl ₆ :Bi). <i>Journal of Materials Chemistry A</i> , 2018, 6, 2577-2584.	5.2	55

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37	A comparative review of the aqueous corrosion of glasses, crystalline ceramics, and metals. Npj Materials Degradation, 2018, 2, .	2.6	150
38	Dense nanocrystalline UO_2 fuel pellets synthesized by high pressure spark plasma sintering. Journal of the American Ceramic Society, 2018, 101, 1105-1115.	1.9	21
39	The thermal stability and consolidation of perovskite variant Cs_2SnCl_6 using spark plasma sintering. Journal of the American Ceramic Society, 2018, 101, 2060-2065.	1.9	15
40	Consolidation of commercial-size UO_2 fuel pellets using spark plasma sintering and microstructure/microchemical analysis. MRS Communications, 2018, 8, 979-987.	0.8	8
41	Microstructure control of macroscopic graphene paper by electrospray deposition and its effect on thermal and electrical conductivities. Applied Physics Letters, 2017, 110, .	1.5	12
42	Toward ultrafast lithium ion capacitors: A novel atomic layer deposition seeded preparation of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ /graphene anode. Nano Energy, 2017, 36, 46-57.	8.2	138
43	Grain growth and pore coarsening in dense nanocrystalline UO_2 fuel pellets. Journal of the American Ceramic Society, 2017, 100, 2651-2658.	1.9	26
44	WastePD, an innovative center on materials degradation. Npj Materials Degradation, 2017, 1, .	2.6	6
45	A first-principles study of the avalanche pressure of alpha zirconium. RSC Advances, 2016, 6, 72551-72558.	1.7	1
46	Stabilizing an amorphous V_2O_5 /carbon nanotube paper electrode with conformal TiO_2 coating by atomic layer deposition for lithium ion batteries. Journal of Materials Chemistry A, 2016, 4, 537-544.	5.2	57
47	Discovering lead-free perovskite solar materials with a split-anion approach. Nanoscale, 2016, 8, 6284-6289.	2.8	116
48	Radiation Stability of Spark Plasma Sintered Lead Vanadate Iodoapatite. Journal of the American Ceramic Society, 2015, 98, 3361-3366.	1.9	15
49	Dense Iodoapatite Ceramics Consolidated by Low Temperature Spark Plasma Sintering. Journal of the American Ceramic Society, 2015, 98, 3733-3739.	1.9	17
50	Cl-Doped ZnO Nanowire Arrays on 3D Graphene Foam with Highly Efficient Field Emission and Photocatalytic Properties. Small, 2015, 11, 4785-4792.	5.2	71
51	Amorphous Ultrathin SnO_2 Films by Atomic Layer Deposition on Graphene Network as Highly Stable Anodes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2015, 7, 27735-27742.	4.0	59
52	Mechanical properties and stabilities of g-ZnS monolayers. RSC Advances, 2015, 5, 11240-11247.	1.7	49
53	Graphene-based sorbents for iodine-129 capture and sequestration. Carbon, 2015, 90, 1-8.	5.4	91
54	Organic-Inorganic Heterointerfaces for Ultrasensitive Detection of Ultraviolet Light. Nano Letters, 2015, 15, 3787-3792.	4.5	117

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55	Ultra-high volumetric capacitance and cyclic stability of fluorine and nitrogen co-doped carbon microspheres. <i>Nature Communications</i> , 2015, 6, 8503.	5.8	529
56	Two-Dimensional van der Waals Epitaxy Kinetics in a Three-Dimensional Perovskite Halide. <i>Crystal Growth and Design</i> , 2015, 15, 4741-4749.	1.4	128
57	Highly thermally conductive and mechanically strong graphene fibers. <i>Science</i> , 2015, 349, 1083-1087.	6.0	564
58	Ultraviolet Photodetector Fabricated from 3D WO ₃ Nanowires/Reduced Graphene Oxide Composite Material. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1659, 193-198.	0.1	3
59	Ultrathin gold island films for time-dependent temperature sensing. <i>Journal of Nanoparticle Research</i> , 2014, 16, 1.	0.8	4
60	Large-Area Freestanding Graphene Paper for Superior Thermal Management. <i>Advanced Materials</i> , 2014, 26, 4521-4526.	11.1	386
61	Facile low temperature solid state synthesis of iodoapatite by high-energy ball milling. <i>RSC Advances</i> , 2014, 4, 38718-38725.	1.7	19
62	High-rate lithiation-induced reactivation of mesoporous hollow spheres for long-lived lithium-ion batteries. <i>Nature Communications</i> , 2014, 5, 4526.	5.8	586
63	Bulk Iodoapatite Ceramic Densified by Spark Plasma Sintering with Exceptional Thermal Stability. <i>Journal of the American Ceramic Society</i> , 2014, 97, 2409-2412.	1.9	43
64	Synthesis of ZnO quantum dot/graphene nanocomposites by atomic layer deposition with high lithium storage capacity. <i>Journal of Materials Chemistry A</i> , 2014, 2, 7319-7326.	5.2	117
65	High quality ZnO@TiO ₂ core-shell nanowires for efficient ultraviolet sensing. <i>Applied Surface Science</i> , 2014, 314, 872-876.	3.1	63
66	Electrospray deposition of a Co ₃ O ₄ nanoparticles-graphene composite for a binder-free lithium ion battery electrode. <i>RSC Advances</i> , 2014, 4, 1521-1525.	1.7	29
67	Pressure effect on stabilities of self-Interstitials in HCP-Zirconium. <i>Scientific Reports</i> , 2014, 4, 5735.	1.6	18
68	Pseudocapacitance of Amorphous TiO ₂ Thin Films Anchored to Graphene and Carbon Nanotubes Using Atomic Layer Deposition. <i>Journal of Physical Chemistry C</i> , 2013, 117, 22497-22508.	1.5	102
69	Tailoring the radiation tolerance of vanadate-phosphate fluorapatites by chemical composition control. <i>RSC Advances</i> , 2013, 3, 15178.	1.7	26
70	Ultraviolet Photodetector Fabricated From Multiwalled Carbon Nanotubes/Zinc-Oxide Nanowires/p-GaN Composite Structure. <i>IEEE Electron Device Letters</i> , 2013, 34, 1169-1171.	2.2	18
71	Heterojunction photodiode fabricated from multiwalled carbon nanotube/ZnO nanowire/p-silicon composite structure. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	26
72	Heterojunction photodiode fabricated from hydrogen treated ZnO nanowires grown on p-silicon substrate. <i>Applied Physics Letters</i> , 2012, 101, 211103.	1.5	36

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73	Unusual rigidity and ideal strength of CrB ₄ and MnB ₄ . Applied Physics Letters, 2012, 100, .	1.5	54
74	Peculiar structure and tensile strength of WB ₄ : nonstoichiometric origin. AIP Advances, 2012, 2, .	0.6	46
75	Phase transition and abnormal compressibility of lanthanide silicate with the apatite structure. Physical Review B, 2012, 85, .	1.1	13
76	Temperature-Dependent Morphology Evolution and Surface Plasmon Absorption of Ultrathin Gold Island Films. Journal of Physical Chemistry C, 2012, 116, 9000-9008.	1.5	82
77	Flexible Pillared Grapheneâ€Paper Electrodes for Highâ€Performance Electrochemical Supercapacitors. Small, 2012, 8, 452-459.	5.2	297
78	Porous nickel oxide nano-sheets for high performance pseudocapacitance materials. Journal of Materials Chemistry, 2011, 21, 16581.	6.7	175
79	Energetic stability, structural transition, and thermodynamic properties of ZnSnO ₃ . Applied Physics Letters, 2011, 98, .	1.5	34
80	Tailoring oxidation degrees of graphene oxide by simple chemical reactions. Applied Physics Letters, 2011, 99, .	1.5	42
81	First-Principles Investigation of Structural, Elastic and Electronic Properties of Lanthanide Titanate Oxides Ln ₂ TiO ₅ . Materials Research Society Symposia Proceedings, 2011, 1298, 85.	0.1	4
82	Ion Beam Irradiation-induced Amorphization in Nano-sized KxLnyTa ₂ O _{7-v} Tantalate Pyrochlore. Materials Research Society Symposia Proceedings, 2011, 1298, 147.	0.1	2
83	Plasma Treated Multi-Walled Carbon Nanotubes (MWCNTs) for Epoxy Nanocomposites. Polymers, 2011, 3, 2142-2155.	2.0	24
84	Large-scale graphitic thin films synthesized on Ni and transferred to insulators: Structural and electronic properties. Journal of Applied Physics, 2010, 107, .	1.1	83
85	Intrinsic Structural Disorder and Radiation Response of Nanocrystalline Gd ₂ (Ti _{0.65} Zr _{0.35}) ₂ O ₇ Pyrochlore. Journal of Physical Chemistry C, 2010, 114, 11810-11815.	1.5	38
86	Propagation of ripples on pyrochlore induced by ion beam bombardment. Physical Review B, 2009, 80, .	1.1	30
87	Ion beam-induced amorphous-to-tetragonal phase transformation and grain growth of nanocrystalline zirconia. Nanotechnology, 2009, 20, 245303.	1.3	49
88	Irradiation effects of synthetic coffinite (USiO ₄) studied by in-situ TEM. Materials Research Society Symposia Proceedings, 2009, 1193, 63.	0.1	3
89	In situ TEM of radiation effects in complex ceramics. Microscopy Research and Technique, 2009, 72, 165-181.	1.2	42
90	Liquid-like phase formation in Gd ₂ Zr ₂ O ₇ by extremely ionizing irradiation. Journal of Applied Physics, 2009, 105, .	1.1	30

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91	Single-ion tracks in $\text{Gd}_2\text{Ti}_2\text{O}_7$. Physical Review B, 2009, 79, .	1.5	12
92	Conjugation of quantum dots and Fe_3O_4 on carbon nanotubes for medical diagnosis and treatment. Applied Physics Letters, 2009, 95, 223702.	1.5	17
93	Enhanced radiation resistance of nanocrystalline pyrochlore $\text{Gd}_2(\text{Ti}_{0.65}\text{Zr}_{0.35})_2\text{O}_7$. Applied Physics Letters, 2009, 94, .	1.5	98
94	Bulk Nanostructured Cu with High Strength and Good Ductility. Advanced Engineering Materials, 2008, 10, 41-45.	1.6	13
95	Graphene segregated on Ni surfaces and transferred to insulators. Applied Physics Letters, 2008, 93, .	1.5	1,116
96	Morphological instability of Cu nanolines induced by Ga^+ -ion bombardment: In situ scanning electron microscopy and theoretical model. Journal of Applied Physics, 2008, 103, 074306.	1.1	6
97	Horizontally aligned Cu_5Si polycrystalline nanorods on Si. Applied Physics Letters, 2008, 92, 253113.	1.5	6
98	High pressure phase transitions and compressibilities of $\text{Er}_2\text{Zr}_2\text{O}_7$ and $\text{Ho}_2\text{Zr}_2\text{O}_7$. Applied Physics Letters, 2008, 92, .	1.5	28
99	Effects of plasma surface modification on interfacial behaviors and mechanical properties of carbon nanotube- Al_2O_3 nanocomposites. Applied Physics Letters, 2007, 91, .	1.5	22
100	Effects of surface modification, carbon nanofiber concentration, and dispersion time on the mechanical properties of carbon-nanofiber/polycarbonate composites. Journal of Applied Polymer Science, 2007, 103, 3792-3797.	1.3	22
101	Study of dielectric and piezoelectric properties of $\text{Pb}(\text{Ni},\text{Nb})\text{O}_3/\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ ceramics using mechanically activated powder. Journal of Materials Science, 2007, 42, 6246-6251.	1.7	3
102	Improving the Mechanical Properties of Polycarbonate Nanocomposites with Plasma-Modified Carbon Nanofibers. Journal of Macromolecular Science - Physics, 2006, 45, 671-679.	0.4	25
103	Patterning Metallic Nanostructures by Ion-Beam-Induced Dewetting and Rayleigh Instability. Nano Letters, 2006, 6, 1047-1052.	4.5	133
104	Low-temperature high-pressure preparation of transparent nanocrystalline MgAl_2O_4 ceramics. Applied Physics Letters, 2006, 88, 213120.	1.5	82
105	Probing cation antisite disorder in $\text{Gd}_2\text{Ti}_2\text{O}_7$ pyrochlore by site-specific near-edge x-ray-absorption fine structure and x-ray photoelectron spectroscopy. Physical Review B, 2004, 70, .	1.1	32
106	Ion-beam irradiation of $\text{Gd}_2\text{Sn}_2\text{O}_7$ and $\text{Gd}_2\text{Hf}_2\text{O}_7$ pyrochlore: Bond-type effect. Journal of Materials Research, 2004, 19, 1575-1580.	1.2	79
107	Magnetic Alignment of Carbon Nanofibers in Polymer Composites. Materials Research Society Symposia Proceedings, 2004, 858, 248.	0.1	0
108	Preparation of YBCO Films on CeO_2 -Buffered (001) YSZ Substrates by a Non-Fluorine MOD Method. Journal of the American Ceramic Society, 2004, 87, 1669-1676.	1.9	31

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109	Nuclear waste disposal of pyrochlore (A ₂ B ₂ O ₇): Nuclear waste form for the immobilization of plutonium and actinides. Journal of Applied Physics, 2004, 95, 5949-5971.	1.1	951
110	Ion Beam-Induced Amorphization of the Pyrochlore Structure-Type: A Review. Materials Research Society Symposia Proceedings, 2003, 792, 190.	0.1	11
111	Microstructures of epitaxial YBa ₂ /Cu ₃ /O _{7-δ} thick films grown by photoassisted metal-organic chemical vapor deposition. IEEE Transactions on Applied Superconductivity, 2003, 13, 3839-3844.	1.1	4
112	Radiation Effects in Murataite Ceramics. Materials Research Society Symposia Proceedings, 2003, 807, 48.	0.1	11
113	Thermochemical Investigations of Zirconolite, Pyrochlore and Brannerite: Candidate Materials for the Immobilization of Plutonium. Materials Research Society Symposia Proceedings, 2003, 807, 337.	0.1	2
114	Microstructural evolution and nanocrystal formation in Pb ⁺ -implanted ZrSiO ₄ single crystals. Journal of Applied Physics, 2003, 94, 5695-5703.	1.1	18
115	Ion-irradiation-induced amorphization of La ₂ Zr ₂ O ₇ pyrochlore. Physical Review B, 2002, 66, .	1.1	246
116	Plasma deposition and characterization of acrylic acid thin film on ZnO nanoparticles. Journal of Materials Research, 2002, 17, 2555-2560.	1.2	57
117	Structural Alterations in Titanate Pyrochlores Induced by Ion Irradiation: Xray Photoelectron Spectrum Interpretation. Materials Research Society Symposia Proceedings, 2002, 713, 1.	0.1	2
118	Ion-Induced Amorphization of Murataite. Materials Research Society Symposia Proceedings, 2002, 713, 1.	0.1	4
119	Heavy Ion Irradiation of Zirconate Pyrochlores. Materials Research Society Symposia Proceedings, 2002, 713, 1.	0.1	5
120	Coating of Ultrathin Polymer Films on Carbon Nanotubes by a Plasma Treatment. Materials Research Society Symposia Proceedings, 2002, 740, 1.	0.1	1
121	Nanoscale Structural Manipulation of Ion Irradiated Pyrochlore. Microscopy and Microanalysis, 2002, 8, 1136-1137.	0.2	0
122	In Situ TEM Study of Order-Disorder Transition in Murataite Ceramics. Microscopy and Microanalysis, 2002, 8, 1424-1425.	0.2	1
123	Tem Study of Nano-Crystals in Strontium Ion-Implanted Cubic Zirconia. Microscopy and Microanalysis, 2001, 7, 406-407.	0.2	0
124	Direct Observation of Single Displacement Cascade in Pyrochlore by Tv-Rate In-Situ TEM and Ex-Situ HRTEM. Microscopy and Microanalysis, 2001, 7, 408-409.	0.2	0
125	Deposition of Polymer Thin Films on ZnO Nanoparticles by a Plasma Treatment. Materials Research Society Symposia Proceedings, 2001, 703, 1.	0.1	1
126	Nanoscale Manipulation of Pyrochlore: New Nanocomposite Ionic Conductors. Physical Review Letters, 2001, 87, 145901.	2.9	146

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127	Heavy Ion Irradiation of Brannerite-type Ceramics. Materials Research Society Symposia Proceedings, 2000, 650, 3171.	0.1	3
128	Joining of Molten Salt Reaction Titanium-metallized Si ₃ N ₄ to Si ₃ N ₄ . Journal of Materials Science Letters, 1998, 17, 2113-2115.	0.5	2