

Jie Lian

List of Publications by Year in descending order

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128
papers

8,845
citations

76196

40
h-index

40881

93
g-index

129
all docs

129
docs citations

129
times ranked

12801
citing authors

#	ARTICLE	IF	CITATIONS
1	Graphene segregated on Ni surfaces and transferred to insulators. Applied Physics Letters, 2008, 93, .	1.5	1,116
2	Nuclear waste disposal of pyrochlore (A ₂ B ₂ O ₇): Nuclear waste form for the immobilization of plutonium and minor actinides. Journal of Applied Physics, 2004, 95, 5949-5971.	1.1	951
3	High-rate lithiation-induced reactivation of mesoporous hollow spheres for long-lived lithium-ion batteries. Nature Communications, 2014, 5, 4526.	5.8	586
4	Highly thermally conductive and mechanically strong graphene fibers. Science, 2015, 349, 1083-1087.	6.0	564
5	Ultrahigh volumetric capacitance and cyclic stability of fluorine and nitrogen co-doped carbon microspheres. Nature Communications, 2015, 6, 8503.	5.8	529
6	Large Area Freestanding Graphene Paper for Superior Thermal Management. Advanced Materials, 2014, 26, 4521-4526.	11.1	386
7	Flexible Pillared Graphene Paper Electrodes for High Performance Electrochemical Supercapacitors. Small, 2012, 8, 452-459.	5.2	297
8	Ion-irradiation-induced amorphization of La ₂ Zr ₂ O ₇ pyrochlore. Physical Review B, 2002, 66, .	1.1	246
9	Microfluidics-enabled orientation and microstructure control of macroscopic graphene fibres. Nature Nanotechnology, 2019, 14, 168-175.	15.6	207
10	Porous nickel oxide nano-sheets for high performance pseudocapacitance materials. Journal of Materials Chemistry, 2011, 21, 16581.	6.7	175
11	A comparative review of the aqueous corrosion of glasses, crystalline ceramics, and metals. Npj Materials Degradation, 2018, 2, .	2.6	150
12	Nanoscale Manipulation of Pyrochlore: New Nanocomposite Ionic Conductors. Physical Review Letters, 2001, 87, 145901.	2.9	146
13	Toward ultrafast lithium ion capacitors: A novel atomic layer deposition seeded preparation of Li ₄ Ti ₅ O ₁₂ /graphene anode. Nano Energy, 2017, 36, 46-57.	8.2	138
14	Patterning Metallic Nanostructures by Ion-Beam-Induced Dewetting and Rayleigh Instability. Nano Letters, 2006, 6, 1047-1052.	4.5	133
15	Two-Dimensional van der Waals Epitaxy Kinetics in a Three-Dimensional Perovskite Halide. Crystal Growth and Design, 2015, 15, 4741-4749.	1.4	128
16	Single-ion tracks in Gd^{2+} . Physical Review B, 2009, 79, .	1.1	126
17	Synthesis of ZnO quantum dot/graphene nanocomposites by atomic layer deposition with high lithium storage capacity. Journal of Materials Chemistry A, 2014, 2, 7319-7326.	5.2	117
18	Organic-Inorganic Heterointerfaces for Ultrasensitive Detection of Ultraviolet Light. Nano Letters, 2015, 15, 3787-3792.	4.5	117

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19	Discovering lead-free perovskite solar materials with a split-anion approach. <i>Nanoscale</i> , 2016, 8, 6284-6289.	2.8	116
20	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
21	Enhanced radiation resistance of nanocrystalline pyrochlore $\text{Gd}_2(\text{Ti}_{0.65}\text{Zr}_{0.35})_2\text{O}_7$. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	98
22	Graphene-based sorbents for iodine-129 capture and sequestration. <i>Carbon</i> , 2015, 90, 1-8.	5.4	91
23	Large-scale graphitic thin films synthesized on Ni and transferred to insulators: Structural and electronic properties. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	83
24	Low-temperature high-pressure preparation of transparent nanocrystalline MgAl_2O_4 ceramics. <i>Applied Physics Letters</i> , 2006, 88, 213120.	1.5	82
25	Temperature-Dependent Morphology Evolution and Surface Plasmon Absorption of Ultrathin Gold Island Films. <i>Journal of Physical Chemistry C</i> , 2012, 116, 9000-9008.	1.5	82
26	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. <i>Journal of Materials Research</i> , 2004, 19, 1575-1580.	1.2	79
27	Cl-Doped ZnO Nanowire Arrays on 3D Graphene Foam with Highly Efficient Field Emission and Photocatalytic Properties. <i>Small</i> , 2015, 11, 4785-4792.	5.2	71
28	High quality ZnO/TiO_2 core-shell nanowires for efficient ultraviolet sensing. <i>Applied Surface Science</i> , 2014, 314, 872-876.	3.1	63
29	Self-accelerated corrosion of nuclear waste forms at material interfaces. <i>Nature Materials</i> , 2020, 19, 310-316.	13.3	61
30	Amorphous Ultrathin SnO_2 Films by Atomic Layer Deposition on Graphene Network as Highly Stable Anodes for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 27735-27742.	4.0	59
31	Plasma deposition and characterization of acrylic acid thin film on ZnO nanoparticles. <i>Journal of Materials Research</i> , 2002, 17, 2555-2560.	1.2	57
32	Stabilizing an amorphous V_2O_5 /carbon nanotube paper electrode with conformal TiO_2 coating by atomic layer deposition for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2016, 4, 537-544.	5.2	57
33	Tunable optical properties and stability of lead free all inorganic perovskites ($\text{Cs}_2\text{SnI}_6\text{Cl}_6$). <i>Journal of Materials Chemistry A</i> , 2018, 6, 2577-2584.	5.2	55
34	Unusual rigidity and ideal strength of CrB_4 and MnB_4 . <i>Applied Physics Letters</i> , 2012, 100, .	1.5	54
35	Recent Advances in Corrosion Science Applicable To Disposal of High-Level Nuclear Waste. <i>Chemical Reviews</i> , 2021, 121, 12327-12383.	23.0	52
36	Ion beam-induced amorphous-to-tetragonal phase transformation and grain growth of nanocrystalline zirconia. <i>Nanotechnology</i> , 2009, 20, 245303.	1.3	49

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37	Mechanical properties and stabilities of g-ZnS monolayers. RSC Advances, 2015, 5, 11240-11247.	1.7	49
38	Peculiar structure and tensile strength of WB4: nonstoichiometric origin. AIP Advances, 2012, 2, .	0.6	46
39	Bulk Iodoapatite Ceramic Densified by Spark Plasma Sintering with Exceptional Thermal Stability. Journal of the American Ceramic Society, 2014, 97, 2409-2412.	1.9	43
40	In situ TEM of radiation effects in complex ceramics. Microscopy Research and Technique, 2009, 72, 165-181.	1.2	42
41	Tailoring oxidation degrees of graphene oxide by simple chemical reactions. Applied Physics Letters, 2011, 99, .	1.5	42
42	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
43	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
44	Heterojunction photodiode fabricated from hydrogen treated ZnO nanowires grown on <i>p</i> -silicon substrate. Applied Physics Letters, 2012, 101, 211103.	1.5	36
45	Energetic stability, structural transition, and thermodynamic properties of ZnSnO ₃ . Applied Physics Letters, 2011, 98, .	1.5	34
46	Nitrogen-doped highly dense but porous carbon microspheres with ultrahigh volumetric capacitance and rate capability for supercapacitors. Journal of Materials Chemistry A, 2019, 7, 476-485.	5.2	33
47	Probing cation antisite disorder in Gd ₂ Ti ₂ 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
48	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
49	Propagation of ripples on pyrochlore induced by ion beam bombardment. Physical Review B, 2009, 80, .	1.1	30
50	Liquid-like phase formation in Gd ₂ Zr ₂ O ₇ by extremely ionizing irradiation. Journal of Applied Physics, 2009, 105, .	1.1	30
51	Electrospray deposition of a Co ₃ O ₄ nanoparticles-graphene composite for a binder-free lithium ion battery electrode. RSC Advances, 2014, 4, 1521-1525.	1.7	29
52	A high performance UV-visible dual-band photodetector based on an inorganic Cs ₂ Sn ₆ perovskite/ZnO heterojunction structure. Journal of Materials Chemistry C, 2020, 8, 1819-1825.	2.7	29
53	High pressure phase transitions and compressibilities of Er ₂ Zr ₂ O ₇ and Ho ₂ Zr ₂ O ₇ . Applied Physics Letters, 2008, 92, .	1.5	28
54	Inorganic vacancy-ordered perovskite Cs ₂ SnCl ₆ :Bi/GaN heterojunction photodiode for narrowband, visible-blind UV detection. Applied Physics Letters, 2019, 115, 121106.	1.5	27

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55	Tailoring the radiation tolerance of vanadate-phosphate fluorapatites by chemical composition control. RSC Advances, 2013, 3, 15178.	1.7	26
56	Heterojunction photodiode fabricated from multiwalled carbon nanotube/ZnO nanowire/p-silicon composite structure. Applied Physics Letters, 2013, 102, .	1.5	26
57	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
58	Improving the Mechanical Properties of Polycarbonate Nanocomposites with Plasma-Modified Carbon Nanofibers. Journal of Macromolecular Science - Physics, 2006, 45, 671-679.	0.4	25
59	Deciphering the degradation mechanism of the lead-free all inorganic perovskite Cs_2SnI_6 . Npj Materials Degradation, 2019, 3, .	2.6	25
60	Plasma Treated Multi-Walled Carbon Nanotubes (MWCNTs) for Epoxy Nanocomposites. Polymers, 2011, 3, 2142-2155.	2.0	24
61	Immobilization of cesium and iodine into $Cs_3Bi_2I_9$ 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
62	In situ Investigation of Water Interaction with Lead-Free All Inorganic Perovskite (Cs_2SnI_6). Journal of Physical Chemistry C, 2019, 123, 9575-9581.	1.5	23
63	Ultrasensitive UV Photodetector Based on Interfacial Charge-Controlled Inorganic Perovskite-Polymer Hybrid Structure. ACS Applied Materials & Interfaces, 2020, 12, 43106-43114.	4.0	23
64	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
65	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
66	Mechanism of iodine release from iodoapatite in aqueous solution. RSC Advances, 2018, 8, 3951-3957.	1.7	22
67	Copper-Coated Reduced Graphene Oxide Fiber Mesh-Polymer Composite Films for Electromagnetic Interference Shielding. ACS Applied Nano Materials, 2020, 3, 5565-5574.	2.4	22
68	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
69	The grain-size effect on thermal conductivity of uranium dioxide. Journal of Applied Physics, 2019, 126, .	1.1	20
70	Facile low temperature solid state synthesis of iodoapatite by high-energy ball milling. RSC Advances, 2014, 4, 38718-38725.	1.7	19
71	Thermally-Conductive and Mechanically-Robust Graphene Nanoplatelet Reinforced UO_2 Composite Nuclear Fuels. Scientific Reports, 2018, 8, 2987.	1.6	19
72	Microstructural evolution and nanocrystal formation in Pb-implanted $ZrSiO_4$ single crystals. Journal of Applied Physics, 2003, 94, 5695-5703.	1.1	18

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73	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
74	Pressure effect on stabilities of self-Interstitials in HCP-Zirconium. <i>Scientific Reports</i> , 2014, 4, 5735.	1.6	18
75	Conjugation of quantum dots and Fe ₃ O ₄ on carbon nanotubes for medical diagnosis and treatment. <i>Applied Physics Letters</i> , 2009, 95, 223702.	1.5	17
76	Dense Iodoapatite Ceramics Consolidated by Low-Temperature Spark Plasma Sintering. <i>Journal of the American Ceramic Society</i> , 2015, 98, 3733-3739.	1.9	17
77	Chemical Durability and Dissolution Kinetics of Iodoapatite in Aqueous Solutions. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 452-462.	1.2	16
78	Radiation Stability of Spark-Plasma-Sintered Lead Vanadate Iodoapatite. <i>Journal of the American Ceramic Society</i> , 2015, 98, 3361-3366.	1.9	15
79	The thermal stability and consolidation of perovskite variant Cs ₂ SnCl ₆ using spark plasma sintering. <i>Journal of the American Ceramic Society</i> , 2018, 101, 2060-2065.	1.9	15
80	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
81	Chemical durability and surface alteration of lanthanide zirconates (A ₂ Zr ₂ O ₇ : A = La-Yb). <i>Journal of the European Ceramic Society</i> , 2021, 41, 6018-6028.	2.8	14
82	Kinetically Controlled Growth of Sub-Millimeter 2D Cs ₂ Sn ₆ Nanosheets at the Liquid-Liquid Interface. <i>Small</i> , 2021, 17, e2006279.	5.2	14
83	Bulk Nanostructured Cu with High Strength and Good Ductility. <i>Advanced Engineering Materials</i> , 2008, 10, 41-45.	1.6	13
84	Phase transition and abnormal compressibility of lanthanide silicate with the apatite structure. <i>Physical Review B</i> , 2012, 85, .	1.1	13
85	A systematic study of lanthanide titanates (A ₂ Ti ₂ O ₇) chemical durability: corrosion mechanisms and control parameters. <i>Corrosion Science</i> , 2021, 185, 109394.	3.0	13
86	Cs ₃ Bi ₂ I ₉ -hydroxyapatite composite waste forms for cesium and iodine immobilization. <i>Journal of Advanced Ceramics</i> , 2022, 11, 712-728.	8.9	13
87	Microstructure control of macroscopic graphene paper by electrospray deposition and its effect on thermal and electrical conductivities. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	12
88	Ion Beam-Induced Amorphization of the Pyrochlore Structure-Type: A Review. <i>Materials Research Society Symposia Proceedings</i> , 2003, 792, 190.	0.1	11
89	Radiation Effects in Murataite Ceramics. <i>Materials Research Society Symposia Proceedings</i> , 2003, 807, 48.	0.1	11
90	Spark plasma sintering-densified vanadinite apatite-based chlorine waste forms with high thermal stability and chlorine confinement. <i>Journal of Nuclear Materials</i> , 2020, 528, 151857.	1.3	10

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109	Ultraviolet Photodetector Fabricated from 3D WO ₃ Nanowires/Reduced Graphene Oxide Composite Material. Materials Research Society Symposia Proceedings, 2014, 1659, 193-198.	0.1	3
110	Degradation mechanism of lead-vanado-iodoapatite in NaCl solution. Corrosion Science, 2020, 172, 108720.	3.0	3
111	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
112	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
113	Structural Alterations in Titanate Pyrochlores Induced by Ion Irradiation: Xray Photoelectron Spectrum Interpretation. Materials Research Society Symposia Proceedings, 2002, 713, 1.	0.1	2
114	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
115	Ion Beam Irradiation-induced Amorphization in Nano-sized K _x Ln _y Ta ₂ O _{7-v} Tantalate Pyrochlore. Materials Research Society Symposia Proceedings, 2011, 1298, 147.	0.1	2
116	Enhanced crevice corrosion of stainless steel 316 by degradation of Cr-containing hollandite crevice former. Corrosion Science, 2022, 205, 110462.	3.0	2
117	Deposition of Polymer Thin Films on ZnO Nanoparticles by a Plasma Treatment. Materials Research Society Symposia Proceedings, 2001, 703, 1.	0.1	1
118	Coating of Ultrathin Polymer Films on Carbon Nanotubes by a Plasma Treatment. Materials Research Society Symposia Proceedings, 2002, 740, 1.	0.1	1
119	In Situ TEM Study of Order-Disorder Transition in Murataite Ceramics. Microscopy and Microanalysis, 2002, 8, 1424-1425.	0.2	1
120	A first-principles study of the avalanche pressure of alpha zirconium. RSC Advances, 2016, 6, 72551-72558.	1.7	1
121	Nanoscale TiO ₂ coating improves water stability of Cs ₂ SnCl ₆ . MRS Communications, 2020, 10, 687-694.	0.8	1
122	Oxidation kinetics of SPS-densified U ₃ Si ₂ fuels Microstructure impact. Journal of Applied Physics, 2022, 131, .	1.1	1
123	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
124	Tem Study of Nano-Crystals in Strontium Ion-Implanted Cubic Zirconia. Microscopy and Microanalysis, 2001, 7, 406-407.	0.2	0
125	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
126	Nanoscale Structural Manipulation of Ion Irradiated Pyrochlore. Microscopy and Microanalysis, 2002, 8, 1136-1137.	0.2	0

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127	Magnetic Alignment of Carbon Nanofibers in Polymer Composites. Materials Research Society Symposia Proceedings, 2004, 858, 248.	0.1	0
128	Long-term interactive corrosion between International Simple Glass and stainless steel. Npj Materials Degradation, 2022, 6, .	2.6	0