Jie Lian

List of Publications by Year in descending order

128 papers	8,845 citations	76326 40 h-index	40979 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, .	3.3	1,116
2	Nuclear waste disposalâ€”pyrochlore (A2B2O7): Nuclear waste form for the immobilization of plutonium and â€œminorâ€•actinides. Journal of Applied Physics, 2004, 95, 5949-5971.	2.5	951
3	High-rate lithiation-induced reactivation of mesoporous hollow spheres for long-lived lithium-ion batteries. Nature Communications, 2014, 5, 4526.	12.8	586
4	Highly thermally conductive and mechanically strong graphene fibers. Science, 2015, 349, 1083-1087.	12.6	564
5	Ultrahigh volumetric capacitance and cyclic stability of fluorine and nitrogen co-doped carbon microspheres. Nature Communications, 2015, 6, 8503.	12.8	529
6	Largeâ€Area Freestanding Graphene Paper for Superior Thermal Management. Advanced Materials, 2014, 26, 4521-4526.	21.0	386
7	Flexible Pillared Grapheneâ€Paper Electrodes for Highâ€Performance Electrochemical Supercapacitors. Small, 2012, 8, 452-459.	10.0	297
8	Ion-irradiation-induced amorphization ofLa2Zr2O7pyrochlore. Physical Review B, 2002, 66, .	3.2	246
9	Microfluidics-enabled orientation and microstructure control of macroscopic graphene fibres. Nature Nanotechnology, 2019, 14, 168-175.	31.5	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, .	5.8	150
12	Nanoscale Manipulation of Pyrochlore: New Nanocomposite Ionic Conductors. Physical Review Letters, 2001, 87, 145901.	7.8	146
13	Toward ultrafast lithium ion capacitors: A novel atomic layer deposition seeded preparation of Li4Ti5O12/graphene anode. Nano Energy, 2017, 36, 46-57.	16.0	138
14	Patterning Metallic Nanostructures by Ion-Beam-Induced Dewetting and Rayleigh Instability. Nano Letters, 2006, 6, 1047-1052.	9.1	133
15	Two-Dimensional van der Waals Epitaxy Kinetics in a Three-Dimensional Perovskite Halide. Crystal Growth and Design, 2015, 15, 4741-4749.	3.0	128
16	Single-ion tracks in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Gd</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msub> Physical Review B, 2009, 79, .	3.2	125
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.	10.3	117
18	Organicâ€“Inorganic Heterointerfaces for Ultrasensitive Detection of Ultraviolet Light. Nano Letters, 2015, 15, 3787-3792.	9.1	117

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19	Discovering lead-free perovskite solar materials with a split-anion approach. Nanoscale, 2016, 8, 6284-6289.	5.6	116
20	Pseudocapacitance of Amorphous TiO₂ Thin Films Anchored to Graphene and Carbon Nanotubes Using Atomic Layer Deposition. Journal of Physical Chemistry C, 2013, 117, 22497-22508.	3.1	102
21	Enhanced radiation resistance of nanocrystalline pyrochlore Gd2(Ti0.65Zr0.35)2O7. Applied Physics Letters, 2009, 94, .	3.3	98
22	Graphene-based sorbents for iodine-129 capture and sequestration. Carbon, 2015, 90, 1-8.	10.3	91
23	Large-scale graphitic thin films synthesized on Ni and transferred to insulators: Structural and electronic properties. Journal of Applied Physics, 2010, 107, .	2.5	83
24	Low-temperature high-pressure preparation of transparent nanocrystalline MgAl2O4 ceramics. Applied Physics Letters, 2006, 88, 213120.	3.3	82
25	Temperature-Dependent Morphology Evolution and Surface Plasmon Absorption of Ultrathin Gold Island Films. Journal of Physical Chemistry C, 2012, 116, 9000-9008.	3.1	82
26	Ion-beam irradiation of Gd2Sn2O7 and Gd2Hf2O7 pyrochlore: Bond-type effect. Journal of Materials Research, 2004, 19, 1575-1580.	2.6	79
27	Cl-Doped ZnO Nanowire Arrays on 3D Graphene Foam with Highly Efficient Field Emission and Photocatalytic Properties. Small, 2015, 11, 4785-4792.	10.0	71
28	High quality ZnOâ€“TiO 2 coreâ€“shell nanowires for efficient ultraviolet sensing. Applied Surface Science, 2014, 314, 872-876.	6.1	63
29	Self-accelerated corrosion of nuclear waste forms at material interfaces. Nature Materials, 2020, 19, 310-316.	27.5	61
30	Amorphous Ultrathin SnO₂ Films by Atomic Layer Deposition on Graphene Network as Highly Stable Anodes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2015, 7, 27735-27742.	8.0	59
31	Plasma deposition and characterization of acrylic acid thin film on ZnO nanoparticles. Journal of Materials Research, 2002, 17, 2555-2560.	2.6	57
32	Stabilizing an amorphous V₂O₅/carbon nanotube paper electrode with conformal TiO₂ coating by atomic layer deposition for lithium ion batteries. Journal of Materials Chemistry A, 2016, 4, 537-544.	10.3	57
33	Tunable optical properties and stability of lead free all inorganic perovskites (Cs₂SnI_xCl_{6â^'x}). Journal of Materials Chemistry A, 2018, 6, 2577-2584.	10.3	55
34	Unusual rigidity and ideal strength of CrB4 and MnB4. Applied Physics Letters, 2012, 100, .	3.3	54
35	Recent Advances in Corrosion Science Applicable To Disposal of High-Level Nuclear Waste. Chemical Reviews, 2021, 121, 12327-12383.	47.7	52
36	Ion beam-induced amorphous-to-tetragonal phase transformation and grain growth of nanocrystalline zirconia. Nanotechnology, 2009, 20, 245303.	2.6	49

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37	Mechanical properties and stabilities of g-ZnS monolayers. RSC Advances, 2015, 5, 11240-11247.	3.6	49
38	Peculiar structure and tensile strength of WB4: nonstoichiometric origin. AIP Advances, 2012, 2, .	1.3	46
39	Bulk Iodoapatite Ceramic Densified by Spark Plasma Sintering with Exceptional Thermal Stability. Journal of the American Ceramic Society, 2014, 97, 2409-2412.	3.8	43
40	In situ TEM of radiation effects in complex ceramics. Microscopy Research and Technique, 2009, 72, 165-181.	2.2	42
41	Tailoring oxidation degrees of graphene oxide by simple chemical reactions. Applied Physics Letters, 2011, 99, .	3.3	42
42	Intrinsic Structural Disorder and Radiation Response of Nanocrystalline Gd₂(Ti_{0.65}Zr_{0.35})₂O₇ Pyrochlore. Journal of Physical Chemistry C, 2010, 114, 11810-11815.	3.1	38
43	Multicomponent pyrochlore solid solutions with uranium incorporation â€“ A new perspective of materials design for nuclear applications. Journal of the European Ceramic Society, 2021, 41, 2870-2882.	5.7	38
44	Heterojunction photodiode fabricated from hydrogen treated ZnO nanowires grown on p-silicon substrate. Applied Physics Letters, 2012, 101, 211103.	3.3	36
45	Energetic stability, structural transition, and thermodynamic properties of ZnSnO3. Applied Physics Letters, 2011, 98, .	3.3	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.	10.3	33
47	Probing cation antisite disorder inGd2Ti2O7pyrochlore by site-specific near-edge x-ray-absorption fine structure and x-ray photoelectron spectroscopy. Physical Review B, 2004, 70, .	3.2	32
48	Preparation of YBCO Films on CeO₂â€Buffered (001) YSZ Substrates by a Nonâ€Fluorine MOD Method. Journal of the American Ceramic Society, 2004, 87, 1669-1676.	3.8	31
49	Propagation of ripples on pyrochlore induced by ion beam bombardment. Physical Review B, 2009, 80, .	3.2	30
50	Liquid-like phase formation in Gd2Zr2O7 by extremely ionizing irradiation. Journal of Applied Physics, 2009, 105, .	2.5	30
51	Electrospray deposition of a Co₃O₄nanoparticlesâ€“graphene composite for a binder-free lithium ion battery electrode. RSC Advances, 2014, 4, 1521-1525.	3.6	29
52	A high performance UVâ€“visible dual-band photodetector based on an inorganic Cs₂SnI₆ perovskite/ZnO heterojunction structure. Journal of Materials Chemistry C, 2020, 8, 1819-1825.	5.5	29
53	High pressure phase transitions and compressibilities of Er2Zr2O7 and Ho2Zr2O7. Applied Physics Letters, 2008, 92, .	3.3	28
54	Inorganic vacancy-ordered perovskite Cs2SnCl6:Bi/GaN heterojunction photodiode for narrowband, visible-blind UV detection. Applied Physics Letters, 2019, 115, 121106.	3.3	27

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55	Tailoring the radiation tolerance of vanadateâ€“phosphate fluorapatites by chemical composition control. RSC Advances, 2013, 3, 15178.	3.6	26
56	Heterojunction photodiode fabricated from multiwalled carbon nanotube/ZnO nanowire/p-silicon composite structure. Applied Physics Letters, 2013, 102, .	3.3	26
57	Grain growth and pore coarsening in dense nanoâ€crystalline UO_{2+x} fuel pellets. Journal of the American Ceramic Society, 2017, 100, 2651-2658.	3.8	26
58	Improving the Mechanical Properties of Polycarbonate Nanocomposites with Plasmaâ€Modified Carbon Nanofibers. Journal of Macromolecular Science - Physics, 2006, 45, 671-679.	1.0	25
59	Deciphering the degradation mechanism of the lead-free all inorganic perovskite Cs2SnI6. Npj Materials Degradation, 2019, 3, .	5.8	25
60	Plasma Treated Multi-Walled Carbon Nanotubes (MWCNTs) for Epoxy Nanocomposites. Polymers, 2011, 3, 2142-2155.	4.5	24
61	Immobilization of cesium and iodine into Cs3Bi2I9 perovskite-silica composites and core-shell waste forms with high waste loadings and chemical durability. Journal of Hazardous Materials, 2021, 401, 123279.	12.4	24
62	In situ Investigation of Water Interaction with Lead-Free All Inorganic Perovskite (Cs₂SnI_xCl_{6â€“x}). Journal of Physical Chemistry C, 2019, 123, 9575-9581.	3.1	23
63	Ultrasensitive UV Photodetector Based on Interfacial Charge-Controlled Inorganic Perovskiteâ€“Polymer Hybrid Structure. ACS Applied Materials & Interfaces, 2020, 12, 43106-43114.	8.0	23
64	Effects of plasma surface modification on interfacial behaviors and mechanical properties of carbon nanotube-Al2O3 nanocomposites. Applied Physics Letters, 2007, 91, .	3.3	22
65	Effects of surface modification, carbon nanofiber concentration, and dispersion time on the mechanical properties of carbon-nanofiberâ€“polycarbonate composites. Journal of Applied Polymer Science, 2007, 103, 3792-3797.	2.6	22
66	Mechanism of iodine release from iodoapatite in aqueous solution. RSC Advances, 2018, 8, 3951-3957.	3.6	22
67	Copper-Coated Reduced Graphene Oxide Fiber Mesh-Polymer Composite Films for Electromagnetic Interference Shielding. ACS Applied Nano Materials, 2020, 3, 5565-5574.	5.0	22
68	Dense nanocrystalline <scp>UO</scp>_{2+x} fuel pellets synthesized by high pressure spark plasma sintering. Journal of the American Ceramic Society, 2018, 101, 1105-1115.	3.8	21
69	The grain-size effect on thermal conductivity of uranium dioxide. Journal of Applied Physics, 2019, 126, .	2.5	20
70	Facile low temperature solid state synthesis of iodoapatite by high-energy ball milling. RSC Advances, 2014, 4, 38718-38725.	3.6	19
71	Thermally-Conductive andÂMechanically-Robust Graphene Nanoplatelet Reinforced UO2 Composite Nuclear Fuels. Scientific Reports, 2018, 8, 2987.	3.3	19
72	Microstructural evolution and nanocrystal formation in Pb+-implanted ZrSiO4 single crystals. Journal of Applied Physics, 2003, 94, 5695-5703.	2.5	18

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73	Ultraviolet Photodetector Fabricated From Multiwalled Carbon Nanotubes/Zinc-Oxide Nanowires/p-GaN Composite Structure. IEEE Electron Device Letters, 2013, 34, 1169-1171.	3.9	18
74	Pressure effect on stabilities of self-Interstitials in HCP-Zirconium. Scientific Reports, 2014, 4, 5735.	3.3	18
75	Conjugation of quantum dots and Fe3O4 on carbon nanotubes for medical diagnosis and treatment. Applied Physics Letters, 2009, 95, 223702.	3.3	17
76	Dense Iodoapatite Ceramics Consolidated by Lowâ€Temperature Spark Plasma Sintering. Journal of the American Ceramic Society, 2015, 98, 3733-3739.	3.8	17
77	Chemical Durability and Dissolution Kinetics of Iodoapatite in Aqueous Solutions. ACS Earth and Space Chemistry, 2019, 3, 452-462.	2.7	16
78	Radiation Stability of Sparkâ€Plasmaâ€Sintered Lead Vanadate Iodoapatite. Journal of the American Ceramic Society, 2015, 98, 3361-3366.	3.8	15
79	The thermal stability and consolidation of perovskite variant Cs₂SnCl₆ using spark plasma sintering. Journal of the American Ceramic Society, 2018, 101, 2060-2065.	3.8	15
80	Effect of solution chemistry on the iodine release from iodoapatite in aqueous environments. Journal of Nuclear Materials, 2019, 525, 161-170.	2.7	14
81	Chemical durability and surface alteration of lanthanide zirconates (A2Zr2O7: A = La-Yb). Journal of the European Ceramic Society, 2021, 41, 6018-6028.	5.7	14
82	Kinetically Controlled Growth of Subâ€Millimeter 2D Cs₂SnI₆ Nanosheets at the Liquidâ€“Liquid Interface. Small, 2021, 17, e2006279.	10.0	14
83	Bulk Nanostructured Cu with High Strength and Good Ductility. Advanced Engineering Materials, 2008, 10, 41-45.	3.5	13
84	Phase transition and abnormal compressibility of lanthanide silicate with the apatite structure. Physical Review B, 2012, 85, .	3.2	13
85	A systematic study of lanthanide titanates (A2Ti2O7) chemical durability: corrosion mechanisms and control parameters. Corrosion Science, 2021, 185, 109394.	6.6	13
86	Cs3Bi2I9-hydroxyapatite composite waste forms for cesium and iodine immobilization. Journal of Advanced Ceramics, 2022, 11, 712-728.	17.4	13
87	Microstructure control of macroscopic graphene paper by electrospray deposition and its effect on thermal and electrical conductivities. Applied Physics Letters, 2017, 110, .	3.3	12
88	Ion Beam-Induced Amorphization of the Pyrochlore Structure-Type: A Review. Materials Research Society Symposia Proceedings, 2003, 792, 190.	0.1	11
89	Radiation Effects in Murataite Ceramics. Materials Research Society Symposia Proceedings, 2003, 807, 48.	0.1	11
90	Spark plasma sintering-densified vanadinite apatite-based chlorine waste forms with high thermal stability and chlorine confinement. Journal of Nuclear Materials, 2020, 528, 151857.	2.7	10

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91	Oxygen point defect accumulation in single-phase <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">U</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mrow><mml:mn>2</mml:mn><mml:mo>+</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review Materials, 2019, 3, .	2.4	10
92	Consolidation of commercial-size UO2 fuel pellets using spark plasma sintering and microstructure/microchemical analysis. MRS Communications, 2018, 8, 979-987.	1.8	8
93	Corrosion interactions between stainless steel and lead vanado-iodoapatite nuclear waste form part I. Npj Materials Degradation, 2020, 4, .	5.8	8
94	Reply to: How much does corrosion of nuclear waste matrices matter. Nature Materials, 2020, 19, 962-963.	27.5	7
95	Corrosion interactions between stainless steel and lead vanado-iodoapatite nuclear waste form part II. Npj Materials Degradation, 2020, 4, .	5.8	7
96	Microstructure Dictating Performance: Assembly of Graphene-Based Macroscopic Structures. Accounts of Materials Research, 2021, 2, 7-20.	11.7	7
97	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.	2.5	6
98	Horizontally aligned Cu5Si polycrystalline nanorods on Si. Applied Physics Letters, 2008, 92, 253113.	3.3	6
99	WastePD, an innovative center on materials degradation. Npj Materials Degradation, 2017, 1, .	5.8	6
100	Heavy Ion Irradiation of Zirconate Pyrochlores. Materials Research Society Symposia Proceedings, 2002, 713, 1.	0.1	5
101	Ion-Induced Amorphization of Murataite. Materials Research Society Symposia Proceedings, 2002, 713, 1.	0.1	4
102	Microstructures of epitaxial YBa/sub 2/Cu/sub 3/O/sub 7-Î´/ thick films grown by photoassisted metal-organic chemical vapor deposition. IEEE Transactions on Applied Superconductivity, 2003, 13, 3839-3844.	1.7	4
103	First-Principles Investigation of Structural, Elastic and Electronic Properties of Lanthanide Titanate Oxides Ln₂TiO₅. Materials Research Society Symposia Proceedings, 2011, 1298, 85.	0.1	4
104	Ultrathin gold island films for time-dependent temperature sensing. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	4
105	Chemical durability and degradation mechanisms of CsPbI₃ as a potential host phase for cesium and iodine sequestration. RSC Advances, 2022, 12, 12242-12252.	3.6	4
106	Heavy Ion Irradiation of Brannerite-type Ceramics. Materials Research Society Symposia Proceedings, 2000, 650, 3171.	0.1	3
107	Study of dielectric and piezoelectric properties of Pb(Ni,Nb)O3â€“Pb(Zr,Ti)O3 ceramics using mechanically activated powder. Journal of Materials Science, 2007, 42, 6246-6251.	3.7	3
108	Irradiation effects of synthetic coffinite (USiO4) studied by in-situ TEM. Materials Research Society Symposia Proceedings, 2009, 1193, 63.	0.1	3

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109	Ultraviolet Photodetector Fabricated from 3D WO3 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.	6.6	3
111	Perovskite-Derived Cs₂SnCl₆â€“Silica Composites as Advanced Waste Forms for Chloride Salt Wastes. Environmental Science & Technology, 2021, 55, 7605-7614.	10.0	3
112	Joining of Molten Salt Reaction Titanium-metallized Si3N4 to Si3N4. 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 KxLnyTa2O7-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.	6.6	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.	0.4	1
120	A first-principles study of the avalanche pressure of alpha zirconium. RSC Advances, 2016, 6, 72551-72558.	3.6	1
121	Nanoscale TiO2 coating improves water stability of Cs2SnCl6. MRS Communications, 2020, 10, 687-694.	1.8	1
122	Oxidation kinetics of SPS-densified U3Si2 fuelsâ€”Microstructure impact. Journal of Applied Physics, 2022, 131, .	2.5	1
123	Large-Area Uniaxial-Oriented Growth of Free-Standing Thin Films at the Liquidâ€“Air Interface with Millimeter-Sized Grains. ACS Nano, 2022, 16, 11802-11814.	14.6	1
124	Tem Study of Nano-Crystals in Strontium Ion-Implanted Cubic Zirconia. Microscopy and Microanalysis, 2001, 7, 406-407.	0.4	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.	0.4	0
126	Nanoscale Structural Manipulation of Ion Irradiated Pyrochlore. Microscopy and Microanalysis, 2002, 8, 1136-1137.	0.4	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, .	5.8	0