

# Gregory R Lumpkin

## List of Publications by Year in descending order

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59  
papers

1,792  
citations

257450

24  
h-index

265206

42  
g-index

60  
all docs

60  
docs citations

60  
times ranked

1271  
citing authors

#	ARTICLE	IF	CITATIONS
1	Profiling hot isostatically pressed canister "wasteform interaction for Pu-bearing zirconolite-rich wasteforms. <i>Journal of the American Ceramic Society</i> , 2022, 105, 5359-5372.	3.8	5
2	The ion irradiation tolerance of the fluorite RE <sub>2</sub> MO <sub>5</sub> (RE = Sm, and Yb, M = Ti, Zr, and Sn) system. <i>Journal of the Australian Ceramic Society</i> , 2022, 58, 287-298.	1.9	2
3	Synthesis and ion-irradiation tolerance of the Dy <sub>2</sub> TiO <sub>5</sub> polymorphs. <i>Acta Materialia</i> , 2021, 204, 116518.	7.9	6
4	Perspectives on Pyrochlores, Defect Fluorites, and Related Compounds: Building Blocks for Chemical Diversity and Functionality. <i>Frontiers in Chemistry</i> , 2021, 9, 778140.	3.6	9
5	Novel complex ceramic oxides, Ln <sub>2</sub> TiO <sub>5</sub> (Ln = La, Sm, Gd, Tb, Dy, Ho, Er, and Yb), for polyphase nuclear wasteforms. <i>Journal of the American Ceramic Society</i> , 2020, 103, 5536-5545.	3.8	5
6	Ion beam irradiation of ABO <sub>4</sub> compounds with the fergusonite, monazite, scheelite, and zircon structures. <i>Journal of the American Ceramic Society</i> , 2020, 103, 5502-5514.	3.8	9
7	The ion-irradiation tolerance of the pyrochlore to fluorite Ho(x)Yb(2-x)TiO <sub>5</sub> and Er <sub>2</sub> TiO <sub>5</sub> compounds: A TEM comparative study using both in-situ and bulk ex-situ irradiation approaches. <i>Journal of Nuclear Materials</i> , 2018, 507, 316-326.	2.7	13
8	In-situ irradiation of Ca <sub>1-x</sub> La <sub>2/3x</sub> TiO <sub>3</sub> defect perovskites: The role of vacancies in recovery. <i>Materialia</i> , 2018, 3, 186-191.	2.7	11
9	The crystal structures and corresponding ion-irradiation response for the Tb(x)Yb(2-x)TiO <sub>5</sub> series. <i>Ceramics International</i> , 2018, 44, 511-519.	4.8	15
10	11. Titanate ceramics for high-level nuclear waste immobilization. , 2017, , 223-242.		1
11	New insights into phase distribution, phase composition and disorder in Y <sub>2</sub> (Zr,Sn) <sub>2</sub> O <sub>7</sub> ceramics from NMR spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 9049-9059.	2.8	22
12	Soft chemical synthesis and structural characterization of Y <sub>2</sub> Hf <sub>x</sub> Ti <sub>2-x</sub> O <sub>7</sub> . <i>Ceramics International</i> , 2015, 41, 5309-5317.	4.8	20
13	New pathway for the preparation of pyrochlore Nd <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> nanoparticles. <i>Ceramics International</i> , 2015, 41, 7618-7625.	4.8	17
14	Lightning-induced shock lamellae in quartz. <i>American Mineralogist</i> , 2015, 100, 1645-1648.	1.9	21
15	Ion-irradiation resistance of the orthorhombic Ln <sub>2</sub> TiO <sub>5</sub> (Ln = La, Pr, Nd, Sm, Eu, Gd, Tb and Dy) series. <i>Journal of Nuclear Materials</i> , 2015, 467, 683-691.	2.7	20
16	Crystal structures of orthorhombic, hexagonal, and cubic compounds of the Sm(x)Yb(2-x)TiO <sub>5</sub> series. <i>Journal of Solid State Chemistry</i> , 2014, 213, 182-192.	2.9	31
17	Microporous gold: Comparison of textures from Nature and experiments. <i>American Mineralogist</i> , 2014, 99, 1171-1174.	1.9	20
18	Synthesis and characterization of Nd <sub>2</sub> Sn <sub>x</sub> Zr <sub>2-x</sub> O <sub>7</sub> pyrochlore ceramics. <i>Ceramics International</i> , 2014, 40, 651-657.	4.8	31

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19	Microstructural Evolution of an Ion Irradiated Ni&ndash;Mo&ndash;Cr&ndash;Fe Alloy at Elevated Temperatures. <i>Materials Transactions</i> , 2014, 55, 428-433.	1.2	8
20	The incorporation of plutonium in lanthanum zirconate pyrochlore. <i>Journal of Nuclear Materials</i> , 2013, 443, 444-451.	2.7	44
21	The pyrochlore to defect fluorite phase transition in $Y_2Sn_{2-x}Zr_xO_7$ . <i>RSC Advances</i> , 2013, 3, 5090.	3.6	55
22	Crystal chemistry and structures of uranium-doped gadolinium zirconates. <i>Journal of Nuclear Materials</i> , 2013, 438, 144-153.	2.7	50
23	Gradual Structural Evolution from Pyrochlore to Defect-Fluorite in $Y_{2-x}Sn_{2-x}Zr_xO_7$ : Average vs Local Structure. <i>Journal of Physical Chemistry C</i> , 2013, 117, 26740-26749.	3.1	54
24	Positron Annihilation in Off-Stoichiometric and Ta-Doped $Zn_2TiO_4$ . <i>Journal of the American Ceramic Society</i> , 2013, 96, 3286-3289.	3.8	3
25	Chemistry and radiation effects of davidite. <i>American Mineralogist</i> , 2013, 98, 275-278.	1.9	5
26	Combined neutron and X-ray diffraction determination of disorder in doped zirconolite-2M. <i>American Mineralogist</i> , 2012, 97, 291-298.	1.9	28
27	The Structural Characterization of a Series of Uranium-containing Gadolinium Zirconates. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1475, 179.	0.1	0
28	An Experimental Determination of the Thermophysical Properties of [NZP]-Structure Type Ceramics. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1475, 215.	0.1	0
29	The Role of Sn, Zr and Hf in the Radiation Damage in II, III, IV and V Pyrochlores. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1383, 29.	0.1	0
30	Radiation Damage of II, III, IV, V Pyrochlores - $CaLnZrNbO_7$ . <i>Materials Research Society Symposia Proceedings</i> , 2012, 1475, 571.	0.1	0
31	Ion irradiation of novel yttrium/ytterbium-based pyrochlores: The effect of disorder. <i>Acta Materialia</i> , 2011, 59, 7530-7537.	7.9	48
32	Ion-beam irradiation of lanthanum compounds in the systems $La_2O_3-Al_2O_3$ and $La_2O_3-TiO_2$ . <i>Journal of Solid State Chemistry</i> , 2010, 183, 2416-2420.	2.9	38
33	Ion Beam Irradiation of Lanthanum Compounds in the Series $La_2O_3-TiO_2$ . <i>Materials Research Society Symposia Proceedings</i> , 2010, 1265, 1.	0.1	0
34	Ion irradiation of the $TiO_2$ polymorphs and cassiterite. <i>American Mineralogist</i> , 2010, 95, 192-195.	1.9	18
35	Mechanisms of Radiation Damage and Properties of Nuclear Materials. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1215, 1.	0.1	0
36	Radiation Damage in Materials - Effects of Disorder. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1193, .	0.1	1

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37	Lanthanum pyrochlores and the effect of yttrium addition in the systems $\text{La}_{2-x}\text{Y}_x\text{Zr}_2\text{O}_7$ and $\text{La}_{2-x}\text{Y}_x\text{Hf}_2\text{O}_7$ . Journal of Solid State Chemistry, 2009, 182, 442-450.	2.9	87
38	Ion Irradiation of Ternary Pyrochlore Oxides. Chemistry of Materials, 2009, 21, 2746-2754.	6.7	46
39	Experimental and atomistic modeling study of ion irradiation damage in thin crystals of the $\text{TiO}_2$ polymorphs. Physical Review B, 2008, 77, .	3.2	43
40	In Situ Radiation Damage Studies of $\text{Ca}_3\text{Zr}_2\text{FeAlSiO}_{12}$ and $\text{Ca}_3\text{Hf}_2\text{FeAlSiO}_{12}$ . Materials Research Society Symposia Proceedings, 2008, 1124, 1.	0.1	0
41	<i>In situ</i> radiation damage studies of $\text{La}_x\text{Sr}_{1-3x}\text{Ti}_2\text{O}_3$ perovskites. Journal of Applied Physics, 2008, 103, .	2.5	25
42	Pyrochlore to Fluorite Transitions – Ordering in Fluorites?. Materials Research Society Symposia Proceedings, 2008, 1122, 1.	0.1	0
43	Ion Irradiation of Ternary Pyrochlores. Materials Research Society Symposia Proceedings, 2008, 1122, 3.	0.1	1
44	On the Characterisation of Order-Disorder in Ion-Irradiated Pyrochlore Compounds by Electron Scattering Methods. Materials Research Society Symposia Proceedings, 2008, 1122, 3.	0.1	0
45	Nature of the chemical bond and prediction of radiation tolerance in pyrochlore and defect fluorite compounds. Journal of Solid State Chemistry, 2007, 180, 1512-1518.	2.9	119
46	Nuclear waste forms. Geological Society Special Publication, 2004, 236, 37-63.	1.3	37
47	Temperature dependence of ion irradiation damage in the pyrochlores $\text{La}_2\text{Zr}_2\text{O}_7$ and $\text{La}_2\text{Hf}_2\text{O}_7$ . Journal of Physics Condensed Matter, 2004, 16, 8557-8570.	1.8	53
48	Aqueous Dissolution and Surface Alteration Studies of Nd-bearing Zirconolite in 0.001M Citric Acid at 90°C. Materials Research Society Symposia Proceedings, 2003, 807, 771.	0.1	1
49	Incorporation of Uranium in Zirconolite ( $\text{CaZrTi}_2\text{O}_7$ ). Journal of the American Ceramic Society, 2002, 85, 1853-1859.	3.8	117
50	Crystal chemistry and durability of the spinel structure type in natural systems. Progress in Nuclear Energy, 2001, 38, 447-454.	2.9	17
51	Alpha-decay damage and aqueous durability of actinide host phases in natural systems. Journal of Nuclear Materials, 2001, 289, 136-166.	2.7	212
52	Heavy ion irradiation studies of columbite, brannerite, and pyrochlore structure types. Journal of Nuclear Materials, 2001, 289, 177-187.	2.7	46
53	In situ studies of ion irradiated zirconolite, pyrochlore and perovskite. Journal of Nuclear Materials, 1997, 250, 36-52.	2.7	78
54	Application of analytical electron microscopy to the study of radiation damage in the complex oxide mineral zirconolite. Micron, 1997, 28, 57-68.	2.2	31

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55	Geochemical alteration of pyrochlore group minerals; pyrochlore subgroup. American Mineralogist, 1995, 80, 732-743.	1.9	167
56	Determination of 25 elements in the complex oxide mineral zirconolite by analytical electron microscopy. Micron, 1994, 25, 581-587.	2.2	55
57	Alpha-recoil damage in titanite (CaTiSiO <sub>5</sub> ): Direct observation and annealing study using high resolution transmission electron microscopy. Journal of Materials Research, 1991, 6, 560-564.	2.6	30
58	Natural Pyrochlores: Analogues For Actinide Host Phases in Radioactive Waste Forms. Materials Research Society Symposia Proceedings, 1984, 44, 647.	0.1	12
59	Crystal chemistry and ion irradiation resistance of Ln <sub>2</sub> ZrO <sub>5</sub> compounds with Ln = Sm, Eu, Gd, and Tb. Journal of the American Ceramic Society, 0, , .	3.8	2