

Karl R Whittle

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6223765/publications.pdf>

Version: 2024-02-01

86
papers

1,858
citations

257450

24
h-index

276875

41
g-index

90
all docs

90
docs citations

90
times ranked

1955
citing authors

#	ARTICLE	IF	CITATIONS
1	Exploring cation disorder in mixed-metal pyrochlore ceramics using ¹⁷ O NMR spectroscopy and first-principles calculations. <i>Magnetic Resonance in Chemistry</i> , 2021, 59, 961-974.	1.9	0
2	Impact of copper(II) on activation product removal from reactor decommissioning effluents in South Korea. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 82, 261-268.	5.8	3
3	Phase Distribution, Composition, and Disorder in Y ₂ (Hf,Sn) ₂ O ₇ Ceramics: Insights from Solid-State NMR Spectroscopy and First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2020, 124, 17073-17084.	3.1	7
4	Ion beam irradiation of ABO ₄ compounds with the fergusonite, monazite, scheelite, and zircon structures. <i>Journal of the American Ceramic Society</i> , 2020, 103, 5502-5514.	3.8	9
5	Resistance to amorphisation in Ca _{1-x} La _{2x/3} TiO ₃ perovskites – a bulk ion-irradiation study. <i>Acta Materialia</i> , 2019, 180, 180-188.	7.9	10
6	Comparison of a new mass-concentration, chain-reaction model with the population-balance model for early- and late-stage aggregation of shattered graphene oxide nanoparticles. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2019, 582, 123862.	4.7	8
7	Prismatic core high temperature reactor fuel modelling incorporating fuel rotation. <i>Nuclear Engineering and Design</i> , 2018, 331, 153-161.	1.7	2
8	¹⁷ O solid-state NMR spectroscopy of A ₂ B ₂ O ₇ oxides: quantitative isotopic enrichment and spectral acquisition?. <i>RSC Advances</i> , 2018, 8, 7089-7101.	3.6	13
9	Cobalt and nickel uptake by silica-based extractants. <i>Separation Science and Technology</i> , 2018, 53, 1552-1562.	2.5	13
10	Synthesis of Prussian blue-embedded porous polymer for detection and removal of Cs ions. <i>Polymer</i> , 2018, 158, 320-326.	3.8	9
11	Aggregation and sedimentation of shattered graphene oxide nanoparticles in dynamic environments: a solid-body rotational approach. <i>Environmental Science: Nano</i> , 2018, 5, 1859-1872.	4.3	7
12	The ion-irradiation tolerance of the pyrochlore to fluorite Ho(x)Yb(2-x)TiO ₅ and Er ₂ TiO ₅ 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
13	In-situ irradiation of Ca _{1-x} La _{2/3x} TiO ₃ defect perovskites: The role of vacancies in recovery. <i>Materialia</i> , 2018, 3, 186-191.	2.7	11
14	Using Machine Learning To Identify Factors That Govern Amorphization of Irradiated Pyrochlores. <i>Chemistry of Materials</i> , 2017, 29, 2574-2583.	6.7	33
15	On a Long Term Strategy for the Success of Nuclear Power. <i>Energies</i> , 2017, 10, 867.	3.1	13
16	Phase Composition and Disorder in La ₂ (Sn,Ti) ₂ O ₇ Ceramics: New Insights from NMR Crystallography. <i>Journal of Physical Chemistry C</i> , 2016, 120, 20288-20296.	3.1	15
17	Characterization of Ordering in A-Site Deficient Perovskite Ca _{1-x} La _{2x/3} TiO ₃ Using STEM/EELS. <i>Inorganic Chemistry</i> , 2016, 55, 9937-9948.	4.0	12
18	Probing Long- and Short-Range Disorder in Y ₂ Ti ₂ (Hf) ₂ O ₇ by Diffraction and Spectroscopy Techniques. <i>Journal of Physical Chemistry C</i> , 2016, 120, 26465-26479.	3.1	18

#	ARTICLE	IF	CITATIONS
19	The influence of crystal structure on ion-irradiation tolerance in the Sm(x)Yb(2-x)TiO5 series. Journal of Nuclear Materials, 2016, 471, 17-24.	2.7	15
20	TEM Characterization of ion radiation damage in Ca(1-X)La2X/3TiO3 Perovskites. Microscopy and Microanalysis, 2015, 21, 1335-1336.	0.4	0
21	New insights into phase distribution, phase composition and disorder in Y₂(Zr,Sn)₂O₇ ceramics from NMR spectroscopy. Physical Chemistry Chemical Physics, 2015, 17, 9049-9059.	2.8	22
22	Soft chemical synthesis and structural characterization of Y2HfxTi2xO7. Ceramics International, 2015, 41, 5309-5317.	4.8	20
23	Radiation effects in Zr and Hf containing garnets. Journal of Nuclear Materials, 2015, 462, 508-513.	2.7	5
24	Microstructures and Tensile Properties of Ultrafine-Grained Ni(1-3.5)wt% SiCNP Composites Prepared by a Powder Metallurgy Route. Acta Metallurgica Sinica (English Letters), 2015, 28, 809-816.	2.9	30
25	Ion-irradiation resistance of the orthorhombic Ln2TiO5 (Ln=La, Pr, Nd, Sm, Eu, Gd, Tb and Dy) series. Journal of Nuclear Materials, 2015, 467, 683-691.	2.7	20
26	Crystal structures of orthorhombic, hexagonal, and cubic compounds of the Sm(x)Yb(2-x)TiO5 series. Journal of Solid State Chemistry, 2014, 213, 182-192.	2.9	31
27	Microstructural Evolution of an Ion Irradiated Ni–Mo–Cr–Fe Alloy at Elevated Temperatures. Materials Transactions, 2014, 55, 428-433.	1.2	8
28	Density and structural effects in the radiation tolerance of TiO2 polymorphs. Journal of Physics Condensed Matter, 2013, 25, 355402.	1.8	10
29	Technetium and ruthenium incorporation into rutile TiO2. Journal of Nuclear Materials, 2013, 441, 380-389.	2.7	16
30	The pyrochlore to defect fluorite phase transition in Y2Sn2xZrxO7. RSC Advances, 2013, 3, 5090.	3.6	55
31	Electron backscatter diffraction characterization of plasma immersion ion implantation effects in stainless steel. Nuclear Instruments & Methods in Physics Research B, 2013, 295, 38-41.	1.4	2
32	Hydrolytic Stability of Mesoporous Zirconium Titanate Frameworks Containing Coordinating Organic Functionalities. ACS Applied Materials & Interfaces, 2013, 5, 4120-4128.	8.0	20
33	Gradual Structural Evolution from Pyrochlore to Defect-Fluorite in Y₂Sn₂Zr₂O₇: Average vs Local Structure. Journal of Physical Chemistry C, 2013, 117, 26740-26749.	3.1	54
34	Combined neutron and X-ray diffraction determination of disorder in doped zirconolite-2M. American Mineralogist, 2012, 97, 291-298.	1.9	28
35	The Role of Sn, Zr and Hf in the Radiation Damage in II, III, IV and V Pyrochlores. Materials Research Society Symposia Proceedings, 2012, 1383, 29.	0.1	0
36	Radiation Damage of II, III, IV, V Pyrochlores - CaLnZrNbO7. Materials Research Society Symposia Proceedings, 2012, 1475, 571.	0.1	0

#	ARTICLE	IF	CITATIONS
37	Systematic calculation of threshold displacement energies: Case study in rutile. <i>Physical Review B</i> , 2012, 85, .	3.2	44
38	Exploiting the Chemical Shielding Anisotropy to Probe Structure and Disorder in Ceramics: ⁸⁹ Y MAS NMR and First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2012, 116, 4273-4286.	3.1	41
39	¹¹⁹ Sn MAS NMR and first-principles calculations for the investigation of disorder in stannate pyrochlores. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 488-497.	2.8	49
40	Ion irradiation of novel yttrium/ytterbium-based pyrochlores: The effect of disorder. <i>Acta Materialia</i> , 2011, 59, 7530-7537.	7.9	48
41	Ion-beam irradiation of lanthanum compounds in the systems La ₂ O ₃ -Al ₂ O ₃ and La ₂ O ₃ -TiO ₂ . <i>Journal of Solid State Chemistry</i> , 2010, 183, 2416-2420.	2.9	38
42	Ionisation efficiency improvements for AMS measurement of actinides. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010, 268, 820-823.	1.4	11
43	Radiation tolerance of Mn ⁺ AX _n phases, Ti ₃ AlC ₂ and Ti ₃ SiC ₂ . <i>Acta Materialia</i> , 2010, 58, 4362-4368.	7.9	177
44	Ion Beam Irradiation of Lanthanum Compounds in the Series La ₂ O ₃ -TiO ₂ . <i>Materials Research Society Symposia Proceedings</i> , 2010, 1265, 1.	0.1	0
45	Ion irradiation of the TiO ₂ polymorphs and cassiterite. <i>American Mineralogist</i> , 2010, 95, 192-195.	1.9	18
46	Optimization of synthesis of the solid solution, Pb(Zr _{1-x} Ti _x)O ₃ on a single substrate using a high-throughput modified molecular-beam epitaxy technique. <i>Journal of Materials Research</i> , 2009, 24, 164-172.	2.6	7
47	Radiation Damage in Materials – Effects of Disorder. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1193, .	0.1	1
48	Lanthanum pyrochlores and the effect of yttrium addition in the systems La _{2-x} Y _x Zr ₂ O ₇ and La _{2-x} Y _x Hf ₂ O ₇ . <i>Journal of Solid State Chemistry</i> , 2009, 182, 442-450.	2.9	87
49	Ion Irradiation of Ternary Pyrochlore Oxides. <i>Chemistry of Materials</i> , 2009, 21, 2746-2754.	6.7	46
50	Cation Disorder in Pyrochlore Ceramics: ⁸⁹ Y MAS NMR and First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2009, 113, 18874-18883.	3.1	62
51	A Model for Electron Scattering in Irradiated Pyrochlore-Fluorite Systems. <i>Microscopy and Microanalysis</i> , 2009, 15, 1358-1359.	0.4	1
52	Experimental and atomistic modeling study of ion irradiation damage in thin crystals of the TiO ₂ polymorphs. <i>Physical Review B</i> , 2008, 77, .	3.2	43
53	Phase Transitions in Lanthanum-Doped Strontium Bismuth Tantalate. <i>Chemistry of Materials</i> , 2008, 20, 6427-6433.	6.7	15
54	In Situ Radiation Damage Studies of Ca ₃ Zr ₂ FeAlSiO ₁₂ and Ca ₃ Hf ₂ FeAlSiO ₁₂ . <i>Materials Research Society Symposia Proceedings</i> , 2008, 1124, 1.	0.1	0

#	ARTICLE	IF	CITATIONS
55	Neutron and Resonant X-ray Diffraction Studies of Zirconolite-2M. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	5
56	Synthesis and Characterisation of Ln_2TiO_5 Compounds. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	6
57	Electron Energy Loss Spectroscopy Measurements of Amorphization of Polymorphs of TiO_2 Induced by Ion Irradiation. Microscopy and Microanalysis, 2008, 14, 420-421.	0.4	0
58	Pyrochlore to Fluorite Transitions – Ordering in Fluorites?. Materials Research Society Symposia Proceedings, 2008, 1122, 1.	0.1	0
59	Ion Irradiation of Ternary Pyrochlores. Materials Research Society Symposia Proceedings, 2008, 1122, 3.	0.1	1
60	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
61	Paramagnetism and ferromagnetism of TiO_2 and ZnO as seen by XMCD: a way to study defects in oxides. Acta Crystallographica Section A: Foundations and Advances, 2008, 64, C106-C106.	0.3	0
62	Synthesis of the Ferroelectric Solid Solution, $\text{Pb}(\text{Zr}_{1-x}\text{Ti}_x)\text{O}_3$ on a Single Substrate Using a Modified Molecular Beam Epitaxy Technique. Materials Research Society Symposia Proceedings, 2007, 1034, 134.	0.1	0
63	<i>In situ</i> Raman spectroscopy of A-site doped barium titanate. Applied Physics Letters, 2007, 91, .	3.3	72
64	Synthesis of the ferroelectric solid solution, $\text{Pb}(\text{Zr}_{1-x}\text{Ti}_x)\text{O}_3$ on a single substrate using a modified molecular beam epitaxy technique. Applied Physics Letters, 2007, 90, 202907.	3.3	21
65	Synthesis of the Ferroelectric Solid Solution, $\text{Pb}(\text{Zr}_{1-x}\text{Ti}_x)\text{O}_3$ on a Single Substrate Using a Modified Molecular Beam Epitaxy (MBE) Technique. Applications of Ferroelectrics, IEEE International Symposium on, 2007, .	0.0	0
66	The structure and ordering of zirconium and hafnium containing garnets studied by electron channelling, neutron diffraction and Mössbauer spectroscopy. Journal of Solid State Chemistry, 2007, 180, 785-791.	2.9	24
67	Structures and phase diagram for the system $\text{CaTiO}_3\text{-La}_2/3\text{TiO}_3$. Journal of Solid State Chemistry, 2007, 180, 1083-1092.	2.9	33
68	The effect of caesium on barium hollandites studied by neutron diffraction and magic-angle spinning (MAS) nuclear magnetic resonance. Journal of Materials Science, 2007, 42, 9379-9391.	3.7	6
69	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
70	^{89}Y Magic-Angle Spinning NMR of $\text{Y}_2\text{Ti}_2\text{-xSn}_x\text{O}_7$ Pyrochlores. Journal of Physical Chemistry B, 2006, 110, 10358-10364.	2.6	47
71	Radiation Tolerance of $\text{A}_2\text{Ti}_2\text{O}_7$ Materials - A Question of Bonding?. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	0
72	Neutron diffraction and MAS NMR of Cesium Tungstate defect pyrochlores. Journal of Solid State Chemistry, 2006, 179, 512-521.	2.9	59

#	ARTICLE	IF	CITATIONS
73	Iron-57 Mössbauer spectroscopy study of phases in the $\text{CaZrTi}_{2-x}\text{Nb}_x\text{Fe}_x\text{O}_7$ zirconolite system. <i>Hyperfine Interactions</i> , 2006, 166, 363-366.	0.5	7
74	Radiation Damage in Pyrochlore and Related Compounds. <i>Materials Research Society Symposia Proceedings</i> , 2006, 932, 1.	0.1	3
75	Crystal Chemistry and Cation Ordering in Zirconolite 2M. <i>Materials Research Society Symposia Proceedings</i> , 2006, 932, 1.	0.1	8
76	Solid solubilities of $(\text{La Nd})_2(\text{Zr,Ti})_2\text{O}_7$ phases deduced by neutron diffraction. <i>Journal of Solid State Chemistry</i> , 2005, 178, 800-810.	2.9	107
77	Disorder and Dynamics in Pollucite from ^{133}Cs and ^{27}Al NMR. <i>Journal of the American Ceramic Society</i> , 2005, 88, 1575-1583.	3.8	20
78	Phase transitions in BaTiO_3 : a high-pressure neutron diffraction study. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2005, 220, .	0.8	14
79	On the nanostructure of radiation-amorphized zircon and pyrochlores: a small-angle x-ray scattering study. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2005, 220, .	0.8	1
80	The Effect of Cs On The Structural Properties Of Barium Titanate Hollandites. <i>Materials Research Society Symposia Proceedings</i> , 2004, 824, 213.	0.1	1
81	Temperature dependence of ion irradiation damage in the pyrochlores $\text{La}_2\text{Zr}_2\text{O}_7$ and $\text{La}_2\text{Hf}_2\text{O}_7$. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 8557-8570.	1.8	53
82	A determination of the electronic conductivity of aerodynamically levitated high temperature liquid metals and semiconductors by contactless methods. <i>Journal of Non-Crystalline Solids</i> , 2002, 312-314, 299-304.	3.1	3
83	Quasielastic neutron scattering study of silver selenium halides. <i>Applied Physics A: Materials Science and Processing</i> , 2002, 74, s1200-s1202.	2.3	0
84	Title is missing!. <i>Journal of Materials Science Letters</i> , 2001, 20, 431-434.	0.5	13
85	A determination of the structure of liquid Ga_2Te_3 using combined X-ray diffraction and neutron diffraction with isotopic substitution. <i>Molecular Physics</i> , 2001, 99, 767-772.	1.7	9
86	Formation of iron-doped mullite ($\text{Al}_{4+2x}\text{Si}_{2-2x}\text{O}_{10-x}$) by temperature- and time-resolved X-ray powder diffraction and EXAFS, and by ^{27}Al MAS NMR spectroscopy. <i>Polyhedron</i> , 1999, 18, 1083-1087.	2.2	3