Chinthaka M Silva

List of Publications by Year
in descending order

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59 papers	1,483 citations	304602 22 h-index	345118 36 g-index
64 all docs	64 docs citations	64 times ranked	1106 citing authors

#	Article	IF	Citations
1	Silicon Carbide Oxidation in Steam up to 2ÂMPa. Journal of the American Ceramic Society, 2014, 97, 2331-2352.	1.9	197
2	Uniform corrosion of FeCrAl alloys in LWR coolant environments. Journal of Nuclear Materials, 2016, 479, 36-47.	1.3	158
3	Stability of SiC-matrix microencapsulated fuel constituents at relevant LWR conditions. Journal of Nuclear Materials, 2014, 448, 389-398.	1.3	83
4	Reaction Sequence and Kinetics of Uranium Nitride Decomposition. Inorganic Chemistry, 2009, 48, 10635-10642.	1.9	76
5	Progress on matrix SiC processing and properties for fully ceramic microencapsulated fuel form. Journal of Nuclear Materials, 2015, 457, 9-17.	1.3	54
6	Anisotropic swelling and microcracking of neutron irradiated Ti3AlC2â€“Ti5Al2C3 materials. Scripta Materialia, 2016, 114, 74-78.	2.6	43
7	LAMDA: Irradiated-Materials Microscopy at Oak Ridge National Laboratory. Microscopy and Microanalysis, 2015, 21, 1003-1004.	0.2	41
8	Irradiation performance of AGR-1 high temperature reactor fuel. Nuclear Engineering and Design, 2016, 306, 2-13.	0.8	41
9	Detection and analysis of particles with failed SiC in AGR-1 fuel compacts. Nuclear Engineering and Design, 2016, 306, 36-46.	0.8	38
10	Microscopic Characterization of Uranium Nitrides Synthesized by Oxidative Ammonolysis of Uranium Tetrafluoride. Chemistry of Materials, 2008, 20, 3076-3084.	3.2	35
11	Oxidative ammonolysis of uranium(IV) fluorides to uranium(VI) nitride. Journal of Nuclear Materials, 2008, 374, 75-78.	1.3	33
12	First elevated-temperature performance testing of coated particle fuel compacts from the AGR-1 irradiation experiment. Nuclear Engineering and Design, 2014, 271, 131-141.	0.8	33
13	High temperature steam oxidation of SiC coating layer of TRISO fuel particles. Journal of Nuclear Materials, 2015, 460, 160-165.	1.3	32
14	Phase stability, swelling, microstructure and strength of Ti3SiC2-TiC ceramics after low dose neutron irradiation. Journal of Nuclear Materials, 2017, 483, 44-53.	1.3	31
15	Characterization of alloy 718 subjected to different thermomechanical treatments. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 691, 195-202.	2.6	30
16	Fabrication of yttrium hydride for high-temperature moderator application. Journal of Nuclear Materials, 2020, 539, 152335.	1.3	30
17	Preparation of UC0.07â”0.10N0.90â”0.93 spheres for TRISO coated fuel particles. Journal of Nuclear Materials, 2014, 448, 399-403.	1.3	28
18	Micro-structural characterization of precipitation-synthesized fluorapatite nano-material by transmission electron microscopy using different sample preparation techniques. Micron, 2008, 39, 269-274.	1.1	27

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19	X-ray absorption fine structure spectroscopic study of uranium nitrides. Journal of Radioanalytical and Nuclear Chemistry, 2012, 292, 989-994.	0.7	26
20	Uranium/technetium separation for the UREX process â€“ synthesis and characterization of solid reprocessing forms. Radiochimica Acta, 2008, 96, 527-533.	0.5	24
21	Characterization of zirconium carbides using electron microscopy, optical anisotropy, Auger depth profiles, X-ray diffraction, and electron density calculated by charge flipping method. Journal of Solid State Chemistry, 2012, 194, 91-99.	1.4	23
22	Carbothermic synthesis of 820Î¼m uranium nitride kernels: Literature review, thermodynamics, analysis, and related experiments. Journal of Nuclear Materials, 2014, 448, 404-411.	1.3	23
23	Quantification of process variables for carbothermic synthesis of UC1-xNx fuel microspheres. Journal of Nuclear Materials, 2017, 483, 176-191.	1.3	22
24	Crystal and Electronic Structures of Neptunium Nitrides Synthesized Using a Fluoride Route. Journal of the American Chemical Society, 2012, 134, 3111-3119.	6.6	20
25	Investigation of mechanical and microstructural properties of Zircaloy-4 under different experimental conditions. Journal of Nuclear Materials, 2018, 499, 546-557.	1.3	19
26	Brittle nature and the related effects of zirconium hydrides in Zircaloy-4. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 767, 138396.	2.6	19
27	Radiation-Induced Changes in Quartz, A Mineral Analog of Nuclear Power Plant Concrete Aggregates. Inorganic Chemistry, 2018, 57, 3329-3338.	1.9	17
28	Characteristics of uranium carbonitride microparticles synthesized using different reaction conditions. Journal of Nuclear Materials, 2014, 454, 405-412.	1.3	16
29	Role of electronic energy loss on defect production and interface stability: Comparison between ceramic materials and high-entropy alloys. Current Opinion in Solid State and Materials Science, 2022, 26, 101001.	5.6	16
30	Characterization of different forms of Zr-2.5Nb samples before and after neutron irradiation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 716, 296-307.	2.6	15
31	Site specific dependencies of hydrogen concentrations in zirconium hydrides. Scripta Materialia, 2019, 158, 136-140.	2.6	15
32	Synthesis and Nanoscale Characterization of (NH4)4ThF8 and ThNF. Inorganic Chemistry, 2009, 48, 5736-5746.	1.9	14
33	Structural Studies of Technetiumâ^'Zirconium Alloys by X-ray Diffraction, High-Resolution Electron Microscopy, and First-Principles Calculations. Inorganic Chemistry, 2010, 49, 1433-1438.	1.9	14
34	Review of technetium chemistry research conducted at the University of Nevada Las Vegas. Journal of Radioanalytical and Nuclear Chemistry, 2009, 282, 605-609.	0.7	12
35	Preparation of technetium metal by thermal treatment under argon/H2O. Journal of Radioanalytical and Nuclear Chemistry, 2009, 279, 43-48.	0.7	12
36	Fabrication and characterization of driver-fuel particles, designed-to-fail fuel particles, and fuel compacts for the US AGR-3/4 irradiation test. Nuclear Engineering and Design, 2014, 271, 123-130.	0.8	12

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37	Microstructure and mechanical properties of titanium aluminum carbides neutron irradiated at 400â€“700 Â°C. Journal of the European Ceramic Society, 2017, 37, 2353-2363.	2.8	12
38	Synthesis of Phase-Pure U₂N₃ Microspheres and Its Decomposition into UN. Inorganic Chemistry, 2015, 54, 293-298.	1.9	11
39	Preparation of uranium fuel kernels with silicon carbide nanoparticles using the internal gelation process. Journal of Nuclear Materials, 2012, 427, 245-248.	1.3	10
40	Chemical reactivity of CVC and CVD SiC with UO2 at high temperatures. Journal of Nuclear Materials, 2015, 460, 52-59.	1.3	10
41	Application of Electron Microscopy in the Observation of Technetium and Technetium Dioxide Nanostructures. Inorganic Chemistry, 2008, 47, 11738-11744.	1.9	9
42	Fabrication and characterization of uraniumâ€“thoriumâ€“zirconium hydrides. Journal of Nuclear Materials, 2009, 392, 151-157.	1.3	9
43	Synthesis and Characterization of Th₂N₂(NH) Isomorphous to Th₂N₃. Inorganic Chemistry, 2012, 51, 3332-3340.	1.9	9
44	Application of Xâ€ray microcomputed tomography in the characterization of irradiated nuclear fuel and material specimens. Journal of Microscopy, 2015, 260, 163-174.	0.8	9
45	An evaluation of tri-valent oxide (Cr2O3) as a grain enlarging dopant for UO2 nuclear fuels fabricated under reducing environment. Journal of Nuclear Materials, 2021, 553, 153053.	1.3	9
46	Investigation of sol-gel feedstock additions and process variables on the density and microstructure of UN microspheres. Journal of Nuclear Materials, 2019, 520, 78-86.	1.3	7
47	Investigation of Nanostructure and Thermal Behavior of Zinc-Substituted Fluorapatite. Inorganic Chemistry, 2008, 47, 7757-7767.	1.9	6
48	Effects of low-temperature neutron irradiation on the microstructure and tensile properties of duplex 2304 stainless steel and its electron-beam welds. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 823, 141780.	2.6	6
49	Fluoride-Conversion Synthesis of Homogeneous Actinide Oxide Solid Solutions. Inorganic Chemistry, 2011, 50, 11004-11010.	1.9	5
50	Structural study of the ammonium octafluoroneptunate, [NH4]4NpF8. Inorganica Chimica Acta, 2016, 448, 93-96.	1.2	5
51	Experimental oxygen potentials for U1â^'yPryO2Â±x and thermodynamic assessment of the U-Pr-O system. Journal of Nuclear Materials, 2016, 470, 111-118.	1.3	5
52	Laser-induced thermal decomposition of uranium triiodide and ammonium uranium fluoride. Journal of Radioanalytical and Nuclear Chemistry, 2021, 329, 1427-1437.	0.7	4
53	Temperature and time effects of post-weld heat treatments on tensile properties and microstructure of Zircaloy-4. Journal of Nuclear Materials, 2021, 551, 152952.	1.3	4
54	A microscopic and crystallographic study of proton irradiated alloy 718. Journal of Nuclear Materials, 2021, 551, 152954.	1.3	3

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55	Microstructural and crystallographic effects of sol-gel synthesized Ti-doped UO2 sintered under reducing conditions. Journal of Nuclear Materials, 2021, 552, 153003.	1.3	3
56	Radiation-Induced Changes in Single Crystal Calcite and Dolomite: Mineral Analogues of Light Water Reactor, Nuclear Power Plant Concrete Aggregates. Journal of Physical Chemistry C, 2022, 126, 634-646.	1.5	3
57	Evaluation of sintering effects on SiC-incorporated UO2 kernels under Ar and Arâ€“4%H2 environments. Journal of Nuclear Materials, 2013, 443, 596-602.	1.3	2
58	Multi-tier Analysis of SiC Breaches in Safety-Tested AGR-1 TRISO Fuel Particles. Microscopy and Microanalysis, 2014, 20, 1812-1813.	0.2	2
59	Corrigendum to â€œMicrostructure and mechanical properties of titanium aluminum carbides neutron irradiated at 400â€“700 Â°Câ€•[J. Eur. Ceram. Soc., 37(6) (2017) 2353â€“2363]. Journal of the European Ceramic Society, 2017, 37, 3225.	2.8	0