Sven Van den Berghe

List of Publications by Year
in descending order

82	2,716	147801	189892
papers	citations	31 h-index	50 g-index

83	83	83	2441
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Montmorillonite-supported nanoscale zero-valent iron for removal of arsenic from aqueous solution: Kinetics and mechanism. Chemical Engineering Journal, 2014, 243, 14-23.	12.7	302
2	Post-irradiation examination of uraniumâ€“7wt% molybdenum atomized dispersion fuel. Journal of Nuclear Materials, 2004, 335, 39-47.	2.7	163
3	Transmission electron microscopy investigation of irradiated Uâ€“7wt%Mo dispersion fuel. Journal of Nuclear Materials, 2008, 375, 340-346.	2.7	155
4	Atomic layer deposition of titanium nitride from TDMAT precursor. Microelectronic Engineering, 2009, 86, 72-77.	2.4	149
5	Growth Kinetics and Crystallization Behavior of TiO[sub 2] Films Prepared by Plasma Enhanced Atomic Layer Deposition. Journal of the Electrochemical Society, 2008, 155, H688.	2.9	111
6	REVIEW OF 15 YEARS OF HIGH-DENSITY LOW-ENRICHED UMo DISPERSION FUEL DEVELOPMENT FOR RESEARCH REACTORS IN EUROPE. Nuclear Engineering and Technology, 2014, 46, 125-146.	2.3	90
7	XPS investigations on cesium uranates: mixed valency behaviour of uranium. Journal of Nuclear Materials, 2000, 277, 28-36.	2.7	73
8	Local structure and oxidation state of uranium in some ternary oxides: X-ray absorption analysis. Journal of Solid State Chemistry, 2007, 180, 54-61.	2.9	72
9	Comparison of Thermal and Plasma-Enhanced ALD/CVD of Vanadium Pentoxide. Journal of the Electrochemical Society, 2009, 156, P122.	2.9	67
10	Irradiation behavior of ground U(Mo) fuel with and without Si added to the matrix. Journal of Nuclear Materials, 2011, 412, 41-52.	2.7	56
11	From High to Low Enriched Uranium Fuel in Research Reactors. Advances in Science and Technology, 0, , .	0.2	55
12	The Local Uranium Environment in Cesium Uranates: A Combined XPS, XAS, XRD, and Neutron Diffraction Analysis. Journal of Solid State Chemistry, 2002, 166, 320-329.	2.9	53
13	Ru thin film grown on TaN by plasma enhanced atomic layer deposition. Thin Solid Films, 2009, 517, 4689-4693.	1.8	49
14	XPS spectra of the compounds , and. Journal of Solid State Chemistry, 2009, 182, 1105-1108.	2.9	46
15	Chromia doped UO2 fuel: Investigation of the lattice parameter. Journal of Nuclear Materials, 2012, 424, 252-260.	2.7	46
16	Microstructure of U3Si2 fuel plates submitted to a high heat flux. Journal of Nuclear Materials, 2004, 327, 121-129.	2.7	45
17	Swelling of U(Mo)â€“Al(Si) dispersion fuel under irradiation â€“ Non-destructive analyses of the LEONIDAS E-FUTURE plates. Journal of Nuclear Materials, 2012, 430, 246-258.	2.7	44
18	Surface engineering of low enriched uraniumâ€“molybdenum. Journal of Nuclear Materials, 2013, 440, 220-228.	2.7	44

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19	Microstructural evolution of U(Mo)â€“Al(Si) dispersion fuel under irradiation â€“ Destructive analyses of the LEONIDAS E-FUTURE plates. Journal of Nuclear Materials, 2013, 441, 439-448.	2.7	44
20	High burn-up structure of U(Mo) dispersion fuel. Journal of Nuclear Materials, 2016, 476, 218-230.	2.7	44
21	X-ray photoelectron spectroscopy on uranium oxides: a comparison between bulk and thin layers. Journal of Nuclear Materials, 2001, 294, 168-174.	2.7	43
22	On the solubility of chromium sesquioxide in uranium dioxide fuel. Journal of Nuclear Materials, 2003, 317, 62-68.	2.7	43
23	Swelling of U(Mo) dispersion fuel under irradiation â€“ Non-destructive analyses of the SELENIUM plates. Journal of Nuclear Materials, 2013, 442, 60-68.	2.7	42
24	Fuel swelling and interaction layer formation in the SELENIUM Si and ZrN coated U(Mo) dispersion fuel plates irradiated at high power in BR2. Journal of Nuclear Materials, 2015, 458, 380-393.	2.7	41
25	Characterization of Uranium Particles Produced by Hydrolysis of UF6Using SEM and SIMS. Microscopy and Microanalysis, 2007, 13, 156-164.	0.4	40
26	Post-irradiation examination of AlFeNi cladded U3Si2 fuel plates irradiated under severe conditions. Journal of Nuclear Materials, 2008, 375, 243-251.	2.7	40
27	The effect of silicon on the interaction between metallic uranium and aluminum: A 50 year long diffusion experiment. Journal of Nuclear Materials, 2008, 381, 242-248.	2.7	39
28	Plasma-Enhanced ALD of Platinum with O₂, N₂and NH₃Plasmas. ECS Journal of Solid State Science and Technology, 2012, 1, Q123-Q129.	1.8	38
29	Towards particle size regulation of chemically deposited lead sulfide (PbS). Journal of Crystal Growth, 2005, 280, 300-308.	1.5	35
30	Antiferromagnetism in MUO3 (M=Na,K,Rb) studied by neutron diffraction. Journal of Solid State Chemistry, 2004, 177, 2231-2236.	2.9	33
31	Heavy ion irradiation of UMo/Al samples PVD coated with Si and ZrN layers. Journal of Nuclear Materials, 2013, 434, 296-302.	2.7	33
32	Determination of fluorine in uranium oxyfluoride particles as an indicator of particle age. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2009, 64, 199-207.	2.9	32
33	Electrical discharge machining of B4Câ€“TiB2 composites. Journal of the European Ceramic Society, 2011, 31, 2023-2030.	5.7	32
34	Effective reduction of fixed charge densities in germanium based metal-oxide-semiconductor devices. Applied Physics Letters, 2011, 99, .	3.3	27
35	Behavior of As(V) with ZVIâ€“H₂O System and the Reduction to As(0). Journal of Physical Chemistry C, 2014, 118, 21614-21621.	3.1	26
36	Ultrathin GeOxNy interlayer formed by in situâ€ˆNH3 plasma pretreatment for passivation of germanium metal-oxide-semiconductor devices. Applied Physics Letters, 2010, 97, .	3.3	25

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37	Microstructural characterization of a thin film ZrN diffusion barrier in an As-fabricated Uâ€“7Mo/Al matrix dispersion fuel plate. Journal of Nuclear Materials, 2015, 458, 406-418.	2.7	25
38	Crystallographic study of Si and ZrN coated Uâ€“Mo atomised particles and of their interaction with al under thermal annealing. Journal of Nuclear Materials, 2013, 442, 124-132.	2.7	24
39	Controllable nitrogen doping in as deposited TiO2 film and its effect on post deposition annealing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	22
40	Pore pressure estimation in irradiated UMo. Journal of Nuclear Materials, 2018, 510, 472-483.	2.7	22
41	A modelling study of the inter-diffusion layer formation in U-Mo/Al dispersion fuel plates at high power. Journal of Nuclear Materials, 2018, 499, 191-203.	2.7	21
42	Electrical discharge machining of ZrO2 toughened WC composites. Materials Chemistry and Physics, 2010, 123, 114-120.	4.0	19
43	Self-organization of cadmium sulfide nanoparticles on the macroscopic scale. Physica Status Solidi (B): Basic Research, 2005, 242, R61-R63.	1.5	18
44	Diffusion barrier properties of TaNx films prepared by plasma enhanced atomic layer deposition from PDMAT with N2 or NH3 plasma. Microelectronic Engineering, 2008, 85, 2059-2063.	2.4	18
45	Microstructure of long-term annealed highly irradiated beryllium. Journal of Nuclear Materials, 2008, 372, 256-262.	2.7	17
46	Texture of atomic layer deposited ruthenium. Microelectronic Engineering, 2010, 87, 1879-1883.	2.4	17
47	Transmission electron microscopy investigation of neutron irradiated Si and ZrN coated UMo particles prepared using FIB. Journal of Nuclear Materials, 2018, 498, 60-70.	2.7	15
48	TiO2/HfO2 Bi-Layer Gate Stacks Grown by Atomic Layer Deposition for Germanium-Based Metal-Oxide-Semiconductor Devices Using GeOxNy Passivation Layer. Electrochemical and Solid-State Letters, 2011, 14, G27.	2.2	14
49	Oxidation of spent UO2 fuel stored in moist environment. Journal of Nuclear Materials, 2003, 317, 226-233.	2.7	13
50	A novel approach to determine the local burnup in irradiated fuels using Atom Probe Tomography (APT). Journal of Nuclear Materials, 2020, 528, 151853.	2.7	13
51	UO2 dissolution in Boom Clay conditions. Journal of Nuclear Materials, 2003, 321, 49-59.	2.7	12
52	STEM-EDS/EELS and APT characterization of ZrN coatings on UMo fuel kernels. Journal of Nuclear Materials, 2018, 511, 174-182.	2.7	12
53	X-ray photoelectron spectroscopy study of mixed-valence effects and charge fluctuation inNaxV2O5. Physical Review B, 2005, 72, .	3.2	11
54	Determination of activation energies of the U(Mo)/Si and U(Mo)/Al solid state reaction using in-situ X-ray diffraction and Kissinger analysis. Solid State Sciences, 2012, 14, 1133-1140.	3.2	11

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55	AlSi matrices for U(Mo) dispersion fuel plates. Journal of Nuclear Materials, 2013, 439, 7-18.	2.7	11
56	Irradiation behavior study of Uâ€“Mo/Al dispersion fuel with high energy Xe. Journal of Nuclear Materials, 2015, 464, 236-244.	2.7	11
57	Effect of fission rate on the microstructure of coated UMo dispersion fuel. Journal of Nuclear Materials, 2017, 494, 10-19.	2.7	11
58	Aluminum cladding oxide growth prediction for high flux research reactors. Journal of Nuclear Materials, 2020, 529, 151926.	2.7	10
59	Quantification Problems in Depth Profiling of PWR Steels Using Ar+ Ion Sputtering and XPS Analysis. Microscopy and Microanalysis, 2006, 12, 432-437.	0.4	8
60	TEM investigation of long-term annealed highly irradiated beryllium. Journal of Nuclear Materials, 2008, 374, 54-60.	2.7	8
61	Microstructural analysis of MTR fuel plates damaged by a coolant flow blockage. Journal of Nuclear Materials, 2009, 394, 87-94.	2.7	8
62	In situ disordering of monoclinic titanium monoxide Ti5O5 studied by transmission electron microscope TEM. Scientific Reports, 2017, 7, 10769.	3.3	8
63	Characterization of fresh EMPIrE and SEMPER FIDELIS U(Mo)/Al fuel plates made with PVD-coated U(Mo) particles. EPJ Nuclear Sciences & Technologies, 2018, 4, 49.	0.7	8
64	Study of the pyrochlore-related structure of Î±-Cs2U4O12 by powder neutron and X-ray diffraction. Solid State Sciences, 2002, 4, 1257-1264.	3.2	6
65	MACROS benchmark calculations and analysis of fission gas release in MOX with high content of plutonium. Progress in Nuclear Energy, 2012, 57, 117-124.	2.9	6
66	ZrN coating as diffusion barrier in U(Mo) dispersion fuel systems. Journal of Nuclear Materials, 2021, 552, 153000.	2.7	6
67	Defect structure of irradiated PH13-8Mo steel. Journal of Nuclear Materials, 2007, 360, 128-135.	2.7	5
68	Microstructural Changes and Chemical Analysis of Fission Products in Irradiated Uranium-7 wt.% Molybdenum Metallic Fuel Using Atom Probe Tomography. Applied Sciences (Switzerland), 2021, 11, 6905.	2.5	5
69	Anisotropic thermal expansion of Ni, Pd and Pt germanides and silicides. Journal Physics D: Applied Physics, 2016, 49, 275307.	2.8	4
70	U(Mo) grain refinement induced by irradiation with high energy iodine. Journal of Nuclear Materials, 2021, 548, 152850.	2.7	4
71	U-Si Based Fuel System. , 2020, , 485-498.		4
72	U-Mo Based Fuel System. , 2020, , 499-530.		3

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73	Bituminised Waste Re-treatment: Replacement of the Bitumen Matrix by a Glass Matrix. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	2
74	Preliminary assessment of possible carbide formation on Be and T contaminated CFC tiles from JET. Fusion Engineering and Design, 2009, 84, 1892-1895.	1.9	1
75	Dimple optimization for XPS characterization of TEXTOR tile depositions. Journal of Nuclear Materials, 2009, 390-391, 1138-1141.	2.7	1
76	Surface compositional study of Be and T contaminated CFC tiles from JET. Journal of Nuclear Materials, 2011, 417, 647-650.	2.7	1
77	Status of the Low Enriched Uranium Fuel Development for High Performance Research Reactors. Advances in Science and Technology, 2014, 94, 43-54.	0.2	1
78	Feasibility studies for simultaneous irradiation of NBSR & MITR fuel elements in the BR2 reactor. Annals of Nuclear Energy, 2019, 127, 303-318.	1.8	1
79	Temperature Effects on Interdiffusion of Al and U-Mo under Irradiation. Journal of Nuclear Materials, 2021, 544, 152684.	2.7	1
80	Study of the Pyrochlore-Related Structure of Î±-Cs2U4O12 by Powder Neutron and X-Ray Diffraction.. ChemInform, 2003, 34, no.	0.0	0
81	Microstructure and calorimetric analysis of the U Mn binary system. Journal of Nuclear Materials, 2019, 514, 380-392.	2.7	0
82	U-Al Based Fuel System. , 2020, , 464-484.		0