

Sven Van den Berghe

List of Publications by Year in descending order

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82

papers

2,716

citations

147801

31

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189892

50

g-index

83

all docs

83

docs citations

83

times ranked

2441

citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Temperature Effects on Interdiffusion of Al and U-Mo under Irradiation. Journal of Nuclear Materials, 2021, 544, 152684. | 2.7 | 1 |
| 2 | U(Mo) grain refinement induced by irradiation with high energy iodine. Journal of Nuclear Materials, 2021, 548, 152850. | 2.7 | 4 |
| 3 | 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 |
| 4 | ZrN coating as diffusion barrier in U(Mo) dispersion fuel systems. Journal of Nuclear Materials, 2021, 552, 153000. | 2.7 | 6 |
| 5 | 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 |
| 6 | Aluminum cladding oxide growth prediction for high flux research reactors. Journal of Nuclear Materials, 2020, 529, 151926. | 2.7 | 10 |
| 7 | U-Mo Based Fuel System. , 2020, , 499-530. | | 3 |
| 8 | U-Si Based Fuel System. , 2020, , 485-498. | | 4 |
| 9 | U-Al Based Fuel System. , 2020, , 464-484. | | 0 |
| 10 | 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 |
| 11 | Microstructure and calorimetric analysis of the U Mn binary system. Journal of Nuclear Materials, 2019, 514, 380-392. | 2.7 | 0 |
| 12 | 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 |
| 13 | 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 |
| 14 | 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 |
| 15 | STEM-EDS/EELS and APT characterization of ZrN coatings on UMo fuel kernels. Journal of Nuclear Materials, 2018, 511, 174-182. | 2.7 | 12 |
| 16 | Pore pressure estimation in irradiated UMo. Journal of Nuclear Materials, 2018, 510, 472-483. | 2.7 | 22 |
| 17 | In situ disordering of monoclinic titanium monoxide Ti5O5 studied by transmission electron microscope TEM. Scientific Reports, 2017, 7, 10769. | 3.3 | 8 |
| 18 | Effect of fission rate on the microstructure of coated UMo dispersion fuel. Journal of Nuclear Materials, 2017, 494, 10-19. | 2.7 | 11 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Anisotropic thermal expansion of Ni, Pd and Pt germanides and silicides. Journal Physics D: Applied Physics, 2016, 49, 275307. | 2.8 | 4 |
| 20 | High burn-up structure of U(Mo) dispersion fuel. Journal of Nuclear Materials, 2016, 476, 218-230. | 2.7 | 44 |
| 21 | 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 |
| 22 | 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 |
| 23 | Irradiation behavior study of Uâ€“Mo/Al dispersion fuel with high energy Xe. Journal of Nuclear Materials, 2015, 464, 236-244. | 2.7 | 11 |
| 24 | 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 |
| 25 | 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 |
| 26 | Controllable nitrogen doping in as deposited TiO ₂ film and its effect on post deposition annealing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, . | 2.1 | 22 |
| 27 | Behavior of As(V) with ZVIâ€“H ₂ O System and the Reduction to As(0). Journal of Physical Chemistry C, 2014, 118, 21614-21621. | 3.1 | 26 |
| 28 | 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 |
| 29 | 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 |
| 30 | 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 |
| 31 | Surface engineering of low enriched uraniumâ€“molybdenum. Journal of Nuclear Materials, 2013, 440, 220-228. | 2.7 | 44 |
| 32 | 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 |
| 33 | AlSi matrices for U(Mo) dispersion fuel plates. Journal of Nuclear Materials, 2013, 439, 7-18. | 2.7 | 11 |
| 34 | 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 |
| 35 | 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 |
| 36 | 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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| 37 | Plasma-Enhanced ALD of Platinum with O ₂ , N ₂ and NH ₃ Plasmas. ECS Journal of Solid State Science and Technology, 2012, 1, Q123-Q129. | 1.8 | 38 |
| 38 | Chromia doped UO ₂ fuel: Investigation of the lattice parameter. Journal of Nuclear Materials, 2012, 424, 252-260. | 2.7 | 46 |
| 39 | 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 |
| 40 | Surface compositional study of Be and T contaminated CFC tiles from JET. Journal of Nuclear Materials, 2011, 417, 647-650. | 2.7 | 1 |
| 41 | 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 |
| 42 | Electrical discharge machining of B ₄ C/TiB ₂ composites. Journal of the European Ceramic Society, 2011, 31, 2023-2030. | 5.7 | 32 |
| 43 | Effective reduction of fixed charge densities in germanium based metal-oxide-semiconductor devices. Applied Physics Letters, 2011, 99, . | 3.3 | 27 |
| 44 | TiO ₂ /HfO ₂ 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 |
| 45 | Electrical discharge machining of ZrO ₂ toughened WC composites. Materials Chemistry and Physics, 2010, 123, 114-120. | 4.0 | 19 |
| 46 | Texture of atomic layer deposited ruthenium. Microelectronic Engineering, 2010, 87, 1879-1883. | 2.4 | 17 |
| 47 | Ultrathin GeOxNy interlayer formed by <i>in situ</i> NH ₃ plasma pretreatment for passivation of germanium metal-oxide-semiconductor devices. Applied Physics Letters, 2010, 97, . | 3.3 | 25 |
| 48 | Comparison of Thermal and Plasma-Enhanced ALD/CVD of Vanadium Pentoxide. Journal of the Electrochemical Society, 2009, 156, P122. | 2.9 | 67 |
| 49 | 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 |
| 50 | XPS spectra of the compounds , and. Journal of Solid State Chemistry, 2009, 182, 1105-1108. | 2.9 | 46 |
| 51 | 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 |
| 52 | Ru thin film grown on TaN by plasma enhanced atomic layer deposition. Thin Solid Films, 2009, 517, 4689-4693. | 1.8 | 49 |
| 53 | Atomic layer deposition of titanium nitride from TDMAT precursor. Microelectronic Engineering, 2009, 86, 72-77. | 2.4 | 149 |
| 54 | Dimple optimization for XPS characterization of TEXTOR tile depositions. Journal of Nuclear Materials, 2009, 390-391, 1138-1141. | 2.7 | 1 |

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| 55 | Microstructural analysis of MTR fuel plates damaged by a coolant flow blockage. Journal of Nuclear Materials, 2009, 394, 87-94. | 2.7 | 8 |
| 56 | TEM investigation of long-term annealed highly irradiated beryllium. Journal of Nuclear Materials, 2008, 374, 54-60. | 2.7 | 8 |
| 57 | Post-irradiation examination of AlFeNi clad U ₃ Si ₂ fuel plates irradiated under severe conditions. Journal of Nuclear Materials, 2008, 375, 243-251. | 2.7 | 40 |
| 58 | Microstructure of long-term annealed highly irradiated beryllium. Journal of Nuclear Materials, 2008, 372, 256-262. | 2.7 | 17 |
| 59 | Transmission electron microscopy investigation of irradiated U-7wt%Mo dispersion fuel. Journal of Nuclear Materials, 2008, 375, 340-346. | 2.7 | 155 |
| 60 | 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 |
| 61 | Diffusion barrier properties of TaN _x films prepared by plasma enhanced atomic layer deposition from PDMA with N ₂ or NH ₃ plasma. Microelectronic Engineering, 2008, 85, 2059-2063. | 2.4 | 18 |
| 62 | Growth Kinetics and Crystallization Behavior of TiO ₂ Films Prepared by Plasma Enhanced Atomic Layer Deposition. Journal of the Electrochemical Society, 2008, 155, H688. | 2.9 | 111 |
| 63 | Characterization of Uranium Particles Produced by Hydrolysis of UF ₆ Using SEM and SIMS. Microscopy and Microanalysis, 2007, 13, 156-164. | 0.4 | 40 |
| 64 | 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 |
| 65 | Defect structure of irradiated PH13-8Mo steel. Journal of Nuclear Materials, 2007, 360, 128-135. | 2.7 | 5 |
| 66 | 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 |
| 67 | Bituminised Waste Re-treatment: Replacement of the Bitumen Matrix by a Glass Matrix. Materials Research Society Symposia Proceedings, 2006, 932, 1. | 0.1 | 2 |
| 68 | Towards particle size regulation of chemically deposited lead sulfide (PbS). Journal of Crystal Growth, 2005, 280, 300-308. | 1.5 | 35 |
| 69 | Self-organization of cadmium sulfide nanoparticles on the macroscopic scale. Physica Status Solidi (B): Basic Research, 2005, 242, R61-R63. | 1.5 | 18 |
| 70 | X-ray photoelectron spectroscopy study of mixed-valence effects and charge fluctuation in Na _x V ₂ O ₅ . Physical Review B, 2005, 72, . | 3.2 | 11 |
| 71 | Microstructure of U ₃ Si ₂ fuel plates submitted to a high heat flux. Journal of Nuclear Materials, 2004, 327, 121-129. | 2.7 | 45 |
| 72 | Post-irradiation examination of uranium-7wt% molybdenum atomized dispersion fuel. Journal of Nuclear Materials, 2004, 335, 39-47. | 2.7 | 163 |

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| 73 | Antiferromagnetism in MUO ₃ (M=Na,K,Rb) studied by neutron diffraction. Journal of Solid State Chemistry, 2004, 177, 2231-2236. | 2.9 | 33 |
| 74 | Study of the Pyrochlore-Related Structure of $\text{Î±-Cs}_2\text{U}_4\text{O}_{12}$ by Powder Neutron and X-Ray Diffraction.. ChemInform, 2003, 34, no. | 0.0 | 0 |
| 75 | On the solubility of chromium sesquioxide in uranium dioxide fuel. Journal of Nuclear Materials, 2003, 317, 62-68. | 2.7 | 43 |
| 76 | UO ₂ dissolution in Boom Clay conditions. Journal of Nuclear Materials, 2003, 321, 49-59. | 2.7 | 12 |
| 77 | Oxidation of spent UO ₂ fuel stored in moist environment. Journal of Nuclear Materials, 2003, 317, 226-233. | 2.7 | 13 |
| 78 | Study of the pyrochlore-related structure of $\text{Î±-Cs}_2\text{U}_4\text{O}_{12}$ by powder neutron and X-ray diffraction. Solid State Sciences, 2002, 4, 1257-1264. | 3.2 | 6 |
| 79 | 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 |
| 80 | 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 |
| 81 | XPS investigations on cesium uranates: mixed valency behaviour of uranium. Journal of Nuclear Materials, 2000, 277, 28-36. | 2.7 | 73 |
| 82 | From High to Low Enriched Uranium Fuel in Research Reactors. Advances in Science and Technology, 0, , . | 0.2 | 55 |