

Kim Vanmeensel

List of Publications by Year in descending order

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120
papers

4,633
citations

81743

39
h-index

114278

63
g-index

126
all docs

126
docs citations

126
times ranked

3919
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling of the temperature distribution during field assisted sintering. <i>Acta Materialia</i> , 2005, 53, 4379-4388.	3.8	399
2	Laser powder bed fusion of Hastelloy X: Effects of hot isostatic pressing and the hot cracking mechanism. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 732, 228-239.	2.6	171
3	Selective laser melting of tungsten and tungsten alloys. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 72, 27-32.	1.7	160
4	Microstructure and mechanical properties of Hastelloy X produced by HP-SLM (high power selective laser melting). <i>Journal of Materials Processing Technology</i> , 2018, 260, 107-119.	2.3	139
5	Effect of post-treatments on the fatigue behaviour of 316L stainless steel manufactured by laser powder bed fusion. <i>International Journal of Fatigue</i> , 2019, 123, 31-39.	2.8	125
6	Influence of sintering conditions on low-temperature degradation of dental zirconia. <i>Dental Materials</i> , 2014, 30, 669-678.	1.6	123
7	Aging resistance of surface-treated dental zirconia. <i>Dental Materials</i> , 2015, 31, 182-194.	1.6	119
8	Highly-translucent, strong and aging-resistant 3Y-TZP ceramics for dental restoration by grain boundary segregation. <i>Acta Biomaterialia</i> , 2015, 16, 215-222.	4.1	117
9	Microstructure and mechanical properties of pulsed electric current sintered B4C-TiB2 composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 1302-1309.	2.6	114
10	Microstructure evolution of 316L produced by HP-SLM (high power selective laser melting). <i>Additive Manufacturing</i> , 2018, 23, 402-410.	1.7	109
11	3Y-TZP ceramics with improved hydrothermal degradation resistance and fracture toughness. <i>Journal of the European Ceramic Society</i> , 2014, 34, 2453-2463.	2.8	98
12	Binderless WC and WC-Co materials obtained by pulsed electric current sintering. <i>International Journal of Refractory Metals and Hard Materials</i> , 2008, 26, 41-47.	1.7	95
13	Environmental assessment of solid state recycling routes for aluminium alloys: Can solid state processes significantly reduce the environmental impact of aluminium recycling?. <i>CIRP Annals - Manufacturing Technology</i> , 2015, 64, 37-40.	1.7	90
14	VC, Cr3C2 and NbC doped WC-Co cemented carbides prepared by pulsed electric current sintering. <i>International Journal of Refractory Metals and Hard Materials</i> , 2007, 25, 417-422.	1.7	89
15	Effect of cation dopant radius on the hydrothermal stability of tetragonal zirconia: Grain boundary segregation and oxygen vacancy annihilation. <i>Acta Materialia</i> , 2016, 106, 48-58.	3.8	85
16	Critical influence of alumina content on the low temperature degradation of 3mol% yttria-stabilized TZP for dental restorations. <i>Journal of the European Ceramic Society</i> , 2015, 35, 741-750.	2.8	84
17	Synthesis and microstructural features of ZrB2-SiC-based composites by reactive spark plasma sintering and reactive hot pressing. <i>Scripta Materialia</i> , 2007, 57, 317-320.	2.6	83
18	Hard, tough and strong ZrO2-WC composites from nanosized powders. <i>Journal of the European Ceramic Society</i> , 2005, 25, 55-63.	2.8	80

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19	Field assisted sintering of electro-conductive ZrO ₂ -based composites. Journal of the European Ceramic Society, 2007, 27, 979-985.	2.8	75
20	In situ synthesis and densification of submicrometer-grained B ₄ C-TiB ₂ composites by pulsed electric current sintering. Journal of the European Ceramic Society, 2011, 31, 637-644.	2.8	75
21	Synthesis and characterization of Cr ₂ AlC ceramics prepared by spark plasma sintering. Materials Letters, 2007, 61, 4442-4445.	1.3	68
22	Hard and tough carbon nanotube-reinforced zirconia-toughened alumina composites prepared by spark plasma sintering. Carbon, 2012, 50, 706-717.	5.4	63
23	Effect of WC particle size and Ag volume fraction on electrical contact resistance and thermal conductivity of Ag-WC contact materials. Materials and Design, 2015, 85, 412-422.	3.3	58
24	Influence of Carbon Nanoparticle Addition (and Impurities) on Selective Laser Melting of Pure Copper. Materials, 2019, 12, 2469.	1.3	58
25	Synthesis, microstructure and mechanical properties of Yttria Stabilized Zirconia (3YTZP) Multi-Walled Nanotube (MWNTs) nanocomposite by direct in-situ growth of MWNTs on Zirconia particles. Composites Science and Technology, 2010, 70, 2086-2092.	3.8	55
26	Microscopic investigation of as built and hot isostatic pressed Hastelloy X processed by Selective Laser Melting. Materials Characterization, 2019, 153, 366-371.	1.9	55
27	(Nb ₄ , Zr ₁) ₄ AlC ₃ MAX Phase Solid Solutions: Processing, Mechanical Properties, and Density Functional Theory Calculations. Inorganic Chemistry, 2016, 55, 5445-5452.	1.9	54
28	The influence of percolation during pulsed electric current sintering of ZrO ₂ -TiN powder compacts with varying TiN content. Acta Materialia, 2007, 55, 1801-1811.	3.8	51
29	Spark Plasma Sintering of Superhard B ₄ C-Cr ₂ ZrB ₂ Ceramics by Carbide Boronizing. Journal of the American Ceramic Society, 2013, 96, 1055-1059.		49
30	Spark Plasma Sintering As a Solid-State Recycling Technique: The Case of Aluminum Alloy Scrap Consolidation. Materials, 2014, 7, 5664-5687.	1.3	49
31	Microstructure and mechanical properties of NbC-matrix hardmetals with secondary carbide addition and different metal binders. International Journal of Refractory Metals and Hard Materials, 2015, 48, 418-426.	1.7	49
32	Effect of processing parameters on microstructure and properties of tungsten heavy alloys fabricated by SLM. International Journal of Refractory Metals and Hard Materials, 2019, 82, 23-30.	1.7	49
33	Influence of the suspension composition on the electric field and deposition rate during electrophoretic deposition. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2004, 245, 35-39.	2.3	48
34	Influence of the type and grain size of the electro-conductive phase on the Wire-EDM performance of ZrO ₂ ceramic composites. CIRP Annals - Manufacturing Technology, 2008, 57, 191-194.	1.7	48
35	A new method to texture dense M+1AX ceramics by spark plasma deformation. Scripta Materialia, 2016, 111, 98-101.	2.6	46
36	Novel Composite Powders with Uniform TiB ₂ Nano-Particle Distribution for 3D Printing. Applied Sciences (Switzerland), 2017, 7, 250.	1.3	46

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37	Lifetime estimation of zirconia ceramics by linear ageing kinetics. <i>Acta Materialia</i> , 2015, 92, 290-298.	3.8	45
38	Residual compressive surface stress increases the bending strength of dental zirconia. <i>Dental Materials</i> , 2017, 33, e147-e154.	1.6	44
39	Origin of the Potential Drop Over the Deposit During Electrophoretic Deposition. <i>Journal of the American Ceramic Society</i> , 2006, 89, 823-828.	1.9	42
40	Mechanical properties of spark plasma sintered FeAl intermetallics. <i>Intermetallics</i> , 2010, 18, 1410-1414.	1.8	40
41	A Mathematical Description of the Kinetics of the Electrophoretic Deposition Process for Al ₂ O ₃ -Based Suspensions. <i>Journal of the American Ceramic Society</i> , 2005, 88, 2036-2039.	1.9	37
42	Electrophoretic Deposition as a Novel Near Net Shaping Technique for Functionally Graded Biomaterials. <i>Key Engineering Materials</i> , 2006, 314, 213-218.	0.4	37
43	Near-threshold fatigue crack growth rates of laser powder bed fusion produced Ti-6Al-4V. <i>Acta Materialia</i> , 2020, 197, 269-282.	3.8	36
44	Laser-based powder bed fusion additive manufacturing of pure copper. <i>Additive Manufacturing</i> , 2021, 42, 101990.	1.7	35
45	Influence of starting powder on the microstructure of WC-Co hardmetals obtained by spark plasma sintering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 475, 87-91.	2.6	32
46	Pulsed electric current sintering and characterization of ultrafine Al ₂ O ₃ -WC composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 584-589.	2.6	32
47	Electrical discharge machining of B ₄ C-TiB ₂ composites. <i>Journal of the European Ceramic Society</i> , 2011, 31, 2023-2030.	2.8	32
48	Development of ZrO ₂ -WC composites by pulsed electric current sintering. <i>Journal of the European Ceramic Society</i> , 2007, 27, 3269-3275.	2.8	31
49	Solid state recycling of pure Mg and AZ31 Mg machining chips via spark plasma sintering. <i>Materials and Design</i> , 2016, 109, 520-529.	3.3	30
50	Powder synthesis and densification of ultrafine B ₄ C-ZrB ₂ composite by pulsed electrical current sintering. <i>Journal of the European Ceramic Society</i> , 2014, 34, 1923-1933.	2.8	28
51	Investigation of Solidification and Precipitation Behavior of Si-Modified 7075 Aluminum Alloy Fabricated by Laser-Based Powder Bed Fusion. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021, 52, 194-210.	1.1	28
52	Novel processing of Ag-WC electrical contact materials using spark plasma sintering. <i>Materials and Design</i> , 2017, 121, 262-271.	3.3	26
53	Microstructural development and mechanical properties of iron based cermets processed by pressureless and spark plasma sintering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 538, 28-34.	2.6	25
54	Bonding Effectiveness to Differently Sandblasted Dental Zirconia. <i>Journal of Adhesive Dentistry</i> , 2015, 17, 235-42.	0.3	25

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55	Structural and Chemical Analysis of the Zirconia/Veneering Ceramic Interface. <i>Journal of Dental Research</i> , 2016, 95, 102-109.	2.5	24
56	Selective Laser Melting process optimization of Ti-Mo-TiC metal matrix composites. <i>CIRP Annals - Manufacturing Technology</i> , 2019, 68, 221-224.	1.7	24
57	Mechanical and electrical properties of selective laser-melted parts produced from surface-oxidized copper powder. <i>Material Design and Processing Communications</i> , 2020, 2, e94.	0.5	24
58	Surface Modified Copper Alloy Powder for Reliable Laser-based Additive Manufacturing. <i>Additive Manufacturing</i> , 2020, 35, 101418.	1.7	23
59	Tailored sintering of VC-doped WC-Co cemented carbides by pulsed electric current sintering. <i>International Journal of Refractory Metals and Hard Materials</i> , 2008, 26, 256-262.	1.7	22
60	Manipulating microstructure and mechanical properties of CuO doped 3Y-TZP nano-ceramics using spark-plasma sintering. <i>Journal of the European Ceramic Society</i> , 2010, 30, 899-904.	2.8	22
61	Effect of temperature on the microstructure and tensile properties of micro-crack free hastelloy X produced by selective laser melting. <i>Additive Manufacturing</i> , 2020, 31, 100995.	1.7	21
62	Modification of Electrical and Mechanical Properties of Selective Laser-Melted CuCr0.3 Alloy Using Carbon Nanoparticles. <i>Advanced Engineering Materials</i> , 2020, 22, 1900946.	1.6	21
63	Crack mitigation in Laser Powder Bed Fusion processed Hastelloy X using a combined numerical-experimental approach. <i>Journal of Alloys and Compounds</i> , 2021, 864, 158803.	2.8	21
64	Synthesis of nano-crystalline apatite type electrolyte powders for solid oxide fuel cells. <i>Journal of the European Ceramic Society</i> , 2010, 30, 1699-1706.	2.8	20
65	Rapid synthesis and elastic properties of fine-grained Ti ₂ SnC produced by spark plasma sintering. <i>Journal of Alloys and Compounds</i> , 2015, 631, 72-76.	2.8	20
66	Pulsed electric current sintering of electrically conductive ceramics. <i>Journal of Materials Science</i> , 2008, 43, 6435-6440.	1.7	19
67	Powder synthesis, processing and characterization of lanthanum silicates for SOFC application. <i>Journal of Alloys and Compounds</i> , 2010, 495, 552-555.	2.8	19
68	Effect of Ni addition on the contact resistance of Ag-WC electrical contacts. <i>Journal of Alloys and Compounds</i> , 2016, 670, 188-197.	2.8	19
69	Enhancing efficiency of field assisted sintering by advanced thermal insulation. <i>Journal of Materials Processing Technology</i> , 2018, 262, 326-339.	3.1	19
70	Wetting behaviour of Cu based alloys on spinel substrates in pyrometallurgical context. <i>Materials Science and Technology</i> , 2015, 31, 1925-1933.	0.8	18
71	In situ transformations during SLM of an ultra-strong TiC reinforced Ti composite. <i>Scientific Reports</i> , 2020, 10, 10523.	1.6	18
72	Increasing the productivity of laser powder bed fusion: Influence of the hull-bulk strategy on part quality, microstructure and mechanical performance of Ti-6Al-4V. <i>Additive Manufacturing</i> , 2020, 33, 101129.	1.7	18

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73	Wetting and solidification of silver alloys in the presence of tungsten carbide. <i>Acta Materialia</i> , 2018, 144, 459-469.	3.8	17
74	In situ alloying and reinforcing of Al6061 during selective laser melting. <i>Procedia CIRP</i> , 2018, 74, 39-43.	1.0	17
75	Influence of Light Irradiation Through Zirconia on the Degree of Conversion of Composite Cements. <i>Journal of Adhesive Dentistry</i> , 2016, 18, 161-71.	0.3	17
76	Influence of CeO ₂ Reduction on the Microstructure and Mechanical Properties of Pulsed Electric Current Sintered Y ₂ O ₃ ?CeO ₂ Co-Stabilized ZrO ₂ Ceramics. <i>Journal of the American Ceramic Society</i> , 2007, 90, 1420-1426.	1.9	16
77	Study of the Effect of Spinel Composition on Metallic Copper Losses in Slags. <i>Journal of Sustainable Metallurgy</i> , 2017, 3, 416-427.	1.1	15
78	Experimental study and simulation of plastic deformation of zirconia-based ceramics in a pulsed electric current apparatus. <i>Acta Materialia</i> , 2013, 61, 2376-2389.	3.8	14
79	Surface integrity of rotary ultrasonic machined ZrO ₂ ?TiN and Al ₂ O ₃ ?TiC?SiC ceramics. <i>Journal of the European Ceramic Society</i> , 2015, 35, 3927-3941.	2.8	14
80	Fatigue crack growth parameters of Laser Powder Bed Fusion produced Ti-6Al-4V. <i>International Journal of Fatigue</i> , 2021, 145, 106100.	2.8	13
81	Ketone-amine based suspensions for electrophoretic deposition of Al ₂ O ₃ and ZrO ₂ . <i>Journal of the European Ceramic Society</i> , 2006, 26, 3531-3537.	2.8	12
82	The Use of Spark Plasma Sintering to Fabricate a Two-phase Material from Blended Aluminium Alloy Scrap and Gas Atomized Powder. <i>Procedia CIRP</i> , 2015, 26, 455-460.	1.0	12
83	Processing of a Graded Ceramic Cutting Tool in the Al ₂ O ₃ -ZrO ₂ -Ti(C,N) System by Electrophoretic Deposition. <i>Materials Science Forum</i> , 2005, 492-493, 705-710.	0.3	11
84	Production and characterization of ZrO ₂ ceramics and composites to be used for hip prosthesis. <i>Journal of Materials Science</i> , 2008, 43, 1599-1611.	1.7	11
85	Thermo-mechanical modelling of stress relief heat treatments after laser-based powder bed fusion. <i>Additive Manufacturing</i> , 2021, 38, 101818.	1.7	11
86	Exploiting the rapid solidification potential of laser powder bed fusion in high strength and crack-free Al-Cu-Mg-Mn-Zr alloys. <i>Additive Manufacturing</i> , 2021, 47, 102210.	1.7	11
87	Hydrothermal stability of mixed stabilised tetragonal (Y, Nd)-ZrO ₂ ceramics. <i>Journal of Alloys and Compounds</i> , 2010, 495, 556-560.	2.8	10
88	Sintering in a graphite powder bed of alumina-toughened zirconia/carbon nanotube composites: a novel way to delay hydrothermal degradation. <i>Ceramics International</i> , 2015, 41, 4569-4580.	2.3	10
89	Aiming for Improved Lifetime of Die and Mold Components through an Integrated Laser Hardening Operation, Combining Machining and a Selective Heat Treatment in One Setup. <i>Procedia CIRP</i> , 2016, 46, 541-544.	1.0	10
90	Electrophoretic Deposition as a Novel Near Net Shaping Technique for Functionally Graded Biomaterials. <i>Materials Science Forum</i> , 2005, 492-493, 213-218.	0.3	9

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91	Influence of Electrostatic Interactions in the Deposit on the Electrical Field Strength during Electrophoretic Deposition. Key Engineering Materials, 2006, 314, 181-186.	0.4	9
92	Throwing Power during Electrophoretic Deposition. Key Engineering Materials, 2006, 314, 187-194.	0.4	9
93	Solid State Recycling of Aluminium Sheet Scrap by Means of Spark Plasma Sintering. Key Engineering Materials, 0, 639, 493-498.	0.4	9
94	Highly conductive and strong CuSn0.3 alloy processed via laser powder bed fusion starting from a tin-coated copper powder. Additive Manufacturing, 2020, 36, 101607.	1.7	8
95	Determination of the structure and orientation of nanometer-sized precipitates in matrix materials via transmission diffraction signals emitted by bulk samples in the Scanning Electron Microscope. Materials Characterization, 2020, 166, 110454.	1.9	8
96	Sintering, thermal stability and mechanical properties of ZrO ₂ -WC composites obtained by pulsed electric current sintering. Frontiers of Materials Science, 2011, 5, 50-56.	1.1	7
97	A Micro-Computed Tomography Comparison of the Porosity in Additively Fabricated CuCr1 Alloy Parts Using Virgin and Surface-Modified Powders. Materials, 2021, 14, 1995.	1.3	7
98	Laser powder bed fusion processability of Ti-6Al-4V powder decorated by B ₄ C particles. Materials Letters, 2021, 296, 129923.	1.3	7
99	Development of a high strength Zr/Sc/Hf-modified Al-Mn-Mg alloy using Laser Powder Bed Fusion: Design of a heterogeneous microstructure incorporating synergistic multiple strengthening mechanisms. Additive Manufacturing, 2022, 57, 102967.	1.7	7
100	Y ₂ O ₃ –Nd ₂ O ₃ double stabilized ZrO ₂ –TiCN nanocomposites. Materials Chemistry and Physics, 2009, 113, 596-601.	2.0	6
101	Electrical Discharge Machining of (Nb _x Zr _{1-x})B ₂ -SiC Composites. Procedia CIRP, 2013, 6, 186-191.	1.0	6
102	Apatite type lanthanum silicate and composite anode half cells. Solid State Ionics, 2011, 192, 419-423.	1.3	5
103	Diamond dispersed Si ₃ N ₄ composites obtained by pulsed electric current sintering. Journal of the European Ceramic Society, 2013, 33, 1237-1247.	2.8	5
104	Influence of ZrH ₂ addition on pulsed electric current sintered ZrB ₂ –SiC composites. Scripta Materialia, 2014, 77, 41-44.	2.6	5
105	Slow crack growth resistance of electrically conductive zirconia-based composites with non-oxide reinforcements. Journal of the European Ceramic Society, 2019, 39, 641-646.	2.8	5
106	Heat treatment possibilities for an in situ $\hat{1}^2$ Ti-TiC composite made by laser powder bed fusion. Additive Manufacturing, 2020, 36, 101577.	1.7	5
107	Corrosion Testing of a Heat Treated 316 L Functional Part Produced by Selective Laser Melting. Materials Sciences and Applications, 2017, 08, 223-233.	0.3	5
108	Microstructure and Mechanical Properties of Spark Plasma Sintered ZrO ₂ /Al ₂ O ₃ /TiC/Nb ₂ O ₅ Nanocomposites. Solid State Phenomena, 2005, 106, 153-160.		

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109	The Evolution of the Electrical Field Drop over the Suspension during EPD. Key Engineering Materials, 2006, 314, 13-18.	0.4	4
110	Texturing of 3Y-TZP zirconia by electrophoretic deposition in a high magnetic field of 17.4T. Journal of the European Ceramic Society, 2014, 34, 3879-3885.	2.8	4
111	Laser powder bed fusion of high strength aluminum. Material Design and Processing Communications, 2021, 3, e161.	0.5	4
112	Effects of laser scanning speed and building direction on the microstructure and mechanical properties of selective laser melted Inconel 718 superalloy. Materials Today Communications, 2022, 30, 103095.	0.9	4
113	Stress Relaxation on Polished Cross-Sections of $\text{Al}_{2.5}\text{O}_{3.5}/\text{ZrO}_{2.5}$ FGM Discs Measured by Raman Spectroscopy. Materials Science Forum, 2005, 492-493, 641-646.	0.3	3
114	Characterization of $\text{Y}_{2.3}\text{O}_{3.3}$, $\text{CeO}_{2.2}$ and $\text{Y}_{2.3}\text{O}_{3.3}+\text{CeO}_{2.2}$ Doped FGM Tetragonal $\text{ZrO}_{2.2}$ Ceramics by Spark Plasma Sintering. Key Engineering Materials, 2007, 333, 231-234.	0.4	3
115	Electrophoretic Deposition as a Novel Near Net Shaping Technique for Functionally Graded Biomaterials. Materials Science Forum, 0, , 213-218.	0.3	3
116	Pulsed Electric Current Sintering of Electrical Discharge Machinable Ceramics. Advances in Science and Technology, 2010, 62, 175-184.	0.2	1
117	Throwing Power during Electrophoretic Deposition. Key Engineering Materials, 0, , 187-194.	0.4	1
118	Effect of Different Stabilizer Addition on Preparation and Hydrothermal Stability of $\text{ZrO}_{2.5}\text{-TiN}$ Composites with Varying TiN Content. Key Engineering Materials, 2008, 361-363, 795-798.	0.4	0
119	Preparation of microflake ink for low cost printing of CIS-Se absorber layers. , 2012, , .		0
120	Influence of Alumina Addition on Low Temperature Degradation of $\text{Y}_{2.5}\text{O}_{3.5}\text{-Coated}$ Powder Based Y-TZP Ceramics. Advances in Science and Technology, 0, , .	0.2	0