# Patrick Grant

## List of Publications by Citations

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211 7,025 6.2 6.22 ext. papers ext. citations avg, IF L-index

#	Paper	IF	Citations
201	The role of nanomaterials in redox-based supercapacitors for next generation energy storage devices. <i>Nanoscale</i> , <b>2011</b> , 3, 839-55	7.7	681
200	Spray forming. <i>Progress in Materials Science</i> , <b>1995</b> , 39, 497-545	42.2	283
199	A novel hybrid supercapacitor with a carbon nanotube cathode and an iron oxide/carbon nanotube composite anode. <i>Journal of Materials Chemistry</i> , <b>2009</b> , 19, 8755		249
198	Ink-Jet Printing of Wax-Based Alumina Suspensions. <i>Journal of the American Ceramic Society</i> , <b>2001</b> , 84, 2514-2520	3.8	179
197	Modelling of droplet dynamic and thermal histories during spray forming[] individual droplet behaviour. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 3097-3108		142
196	An investigation of nanostructured thin film EMoO3 based supercapacitor electrodes in an aqueous electrolyte. <i>Electrochimica Acta</i> , <b>2013</b> , 91, 253-260	6.7	140
195	A synchrotron X-ray radiography study of dendrite fragmentation induced by a pulsed electromagnetic field in an All 5Cu alloy. <i>Acta Materialia</i> , <b>2014</b> , 70, 228-239	8.4	137
194	A quantitative study of solute diffusion field effects on heterogeneous nucleation and the grain size of alloys. <i>Acta Materialia</i> , <b>2011</b> , 59, 2135-2144	8.4	122
193	Microwave dielectric characterisation of 3D-printed BaTiO3/ABS polymer composites. <i>Scientific Reports</i> , <b>2016</b> , 6, 22714	4.9	114
192	Isothermal grain coarsening of spray formed alloys in the semi-solid state. <i>Acta Materialia</i> , <b>2002</b> , 50, 25	51 <del>8.</del> <b>2</b> 53	35114
191	3D printed anisotropic dielectric composite with meta-material features. <i>Materials and Design</i> , <b>2016</b> , 93, 423-430	8.1	99
190	Printable magnetite and pyrrole treated magnetite based electrodes for supercapacitors. <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 7637		96
189	A High-Speed Imaging and Modeling Study of Dendrite Fragmentation Caused by Ultrasonic Cavitation. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2012</b> , 43, 3755-3766	2.3	95
188	Spray deposition of steam treated and functionalized single-walled and multi-walled carbon nanotube films for supercapacitors. <i>Nanotechnology</i> , <b>2009</b> , 20, 065605	3.4	92
187	Solidification in Spray Forming. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2007</b> , 38, 1520-1529	2.3	90
186	Microstructural characterisation of spray formed SiBOAl for thermal management applications. <i>Scripta Materialia</i> , <b>2006</b> , 55, 111-114	5.6	79
185	Fe3O4/carbon nanofibres with necklace architecture for enhanced electrochemical energy storage. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 14245-14253	13	77

### (2013-1993)

184	Modelling of droplet dynamic and thermal histories during spray forming. Effect of process parameters. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 3109-3118		76	
183	Enhancing the supercapacitor behaviour of novel Fe3O4/FeOOH nanowire hybrid electrodes in aqueous electrolytes. <i>Journal of Power Sources</i> , <b>2015</b> , 274, 907-915	8.9	75	
182	The velocity and temperature of steel droplets during electric arc spraying. <i>Surface and Coatings Technology</i> , <b>2005</b> , 195, 91-101	4.4	75	
181	Spray deposited fluoropolymer/multi-walled carbon nanotube composite films with high dielectric permittivity at low percolation threshold. <i>Carbon</i> , <b>2009</b> , 47, 561-569	10.4	64	
180	Coral-like directional porosity lithium ion battery cathodes by ice templating. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 14689-14699	13	64	
179	One-step spray processing of high power all-solid-state supercapacitors. <i>Scientific Reports</i> , <b>2013</b> , 3, 239	<b>3</b> 4.9	62	
178	Production of hollow and porous Fe2O3 from industrial mill scale and its potential for large-scale electrochemical energy storage applications. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 2597-2604	13	61	
177	SnS/PbS nanocrystal heterojunction photovoltaics. <i>Nanotechnology</i> , <b>2010</b> , 21, 185202	3.4	57	
176	Nanomechanical characterization of SnAgIu/Cu jointsPart 1: Young modulus, hardness and deformation mechanisms as a function of temperature. <i>Acta Materialia</i> , <b>2013</b> , 61, 2460-2470	8.4	56	
175	Crystal nucleation in metallic alloys using x-ray radiography and machine learning. <i>Science Advances</i> , <b>2018</b> , 4, eaar4004	14.3	55	
174	Solid-state supercapacitors with rationally designed heterogeneous electrodes fabricated by large area spray processing for wearable energy storage applications. <i>Scientific Reports</i> , <b>2016</b> , 6, 25684	4.9	52	
173	Microstructure evolution of vacuum plasma sprayed CoNiCrAlY coatings after heat treatment and isothermal oxidation. <i>Surface and Coatings Technology</i> , <b>2006</b> , 201, 2887-2896	4.4	52	
172	Influence of cooling rate on the Fe intermetallic formation in an AA6063 Al alloy. <i>Journal of Alloys and Compounds</i> , <b>2013</b> , 555, 274-282	5.7	50	
171	Processing and microstructure characterisation of oxide dispersion strengthened Fell 4Crl.4Til.25Y2O3 ferritic steels fabricated by spark plasma sintering. <i>Journal of Nuclear Materials</i> , <b>2015</b> , 464, 61-68	3.3	49	
170	Fabrication of Composite Filaments with High Dielectric Permittivity for Fused Deposition 3D Printing. <i>Materials</i> , <b>2017</b> , 10,	3.5	48	
169	The spatial and temporal distribution of dendrite fragmentation in solidifying Al-Cu alloys under different conditions. <i>Acta Materialia</i> , <b>2016</b> , 121, 384-395	8.4	47	
168	Oxidation during electric arc spray forming of steel. <i>Journal of Materials Processing Technology</i> , <b>2006</b> , 178, 259-269	5.3	46	
167	Scaleable ultra-thin and high power density graphene electrochemical capacitor electrodes manufactured by aqueous exfoliation and spray deposition. <i>Carbon</i> , <b>2013</b> , 52, 337-346	10.4	45	

166	Amorphization in extreme deformation of the CrMnFeCoNi high-entropy alloy. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	45
165	Nanomechanical characterization of SnAgflu/Cu jointsPart 2: Nanoindentation creep and its relationship with uniaxial creep as a function of temperature. <i>Acta Materialia</i> , <b>2013</b> , 61, 2471-2480	8.4	44
164	Spray processing of TiO2 nanoparticle/ionomer coatings on carbon nanotube scaffolds for solid-state supercapacitors. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 11022	13	42
163	Spray forming of aluminium-copper alloys. <i>Materials Science &amp; Discourse A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1991</b> , 134, 1111-1114	5.3	42
162	Phase Field Simulation of Binary Alloy Dendrite Growth Under Thermal- and Forced-Flow Fields: An Implementation of the Parallel Multigrid Approach. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , <b>2013</b> , 44, 924-937	2.5	41
161	Processing, microstructure and property aspects of a spraycast AlMgIliIr alloy. <i>Acta Materialia</i> , <b>2007</b> , 55, 1885-1894	8.4	41
160	A two layer electrode structure for improved Li Ion diffusion and volumetric capacity in Li Ion batteries. <i>Nano Energy</i> , <b>2017</b> , 31, 377-385	17.1	40
159	Ultrasonic liquid metal processing: The essential role of cavitation bubbles in controlling acoustic streaming. <i>Ultrasonics Sonochemistry</i> , <b>2019</b> , 55, 243-255	8.9	39
158	Droplet splashing during arc spraying of steel and the effect on deposit microstructure. <i>Journal of Thermal Spray Technology</i> , <b>2000</b> , 9, 250-258	2.5	39
157	Low-tortuosity and graded lithium ion battery cathodes by ice templating. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 21421-21431	13	36
156	Pitting corrosion of spray formed AlliMg alloys. Corrosion Science, 2008, 50, 3221-3226	6.8	36
155	An electrochemical study of repassivation of aluminium alloys with SEM examination of the pit interiors using resin replicas. <i>Corrosion Science</i> , <b>2008</b> , 50, 3233-3240	6.8	36
154	Spray deposition of polymer nanocomposite films for dielectric applications. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2008</b> , 151, 140-145	3.1	36
153	Modelling the shape and thermal dynamics of Ni superalloy rings during spray forming Part 1: Shape modelling (Droplet deposition, splashing and redeposition. <i>Acta Materialia</i> , <b>2008</b> , 56, 1588-1596	8.4	35
152	The monitoring of deposit surface temperatures during spray-forming by infrared thermal-imaging. <i>Scripta Metallurgica</i> , <b>1989</b> , 23, 1651-1656		35
151	3D Printing of NiZn ferrite/ABS Magnetic Composites for Electromagnetic Devices. <i>Materials Research Society Symposia Proceedings</i> , <b>2015</b> , 1788, 29-35		34
150	Layer-by-layer spray deposition and unzipping of single-wall carbon nanotube-based thin film electrodes for electrochemical capacitors. <i>Carbon</i> , <b>2013</b> , 61, 525-536	10.4	34
149	Low pressure plasma-sprayed Al2O3 and Al2O3/SiC nanocomposite coatings from different feedstock powders. <i>Journal of the European Ceramic Society</i> , <b>2003</b> , 23, 961-976	6	34

148	Multiscale Engineered Si/SiO Nanocomposite Electrodes for Lithium-Ion Batteries Using Layer-by-Layer Spray Deposition. <i>ACS Applied Materials &amp; Deposition (Naterial Science)</i> 10, 15624-15633	9.5	33	
147	The structural changes of Y2O3 in ferritic ODS alloys during milling. <i>Journal of Nuclear Materials</i> , <b>2014</b> , 447, 242-247	3.3	33	
146	3D-Printed High Dielectric Contrast Gradient Index Flat Lens for a Directive Antenna with Reduced Dimensions. <i>Advanced Materials Technologies</i> , <b>2016</b> , 1, 1600072	6.8	32	
145	Colloidal synthesis of lead oxide nanocrystals for photovoltaics. <i>Chemical Communications</i> , <b>2010</b> , 46, 2802-4	5.8	32	
144	Control of temperature profile for a spray deposition process. <i>IEEE Transactions on Control Systems Technology</i> , <b>2003</b> , 11, 656-667	4.8	31	
143	2020 roadmap on solid-state batteries. <i>JPhys Energy</i> , <b>2020</b> , 2, 032008	4.9	31	
142	Phase field study of the tip operating state of a freely growing dendrite against convection using a novel parallel multigrid approach. <i>Journal of Computational Physics</i> , <b>2014</b> , 257, 278-297	4.1	30	
141	The equiaxed-banded microstructural transition during low pressure plasma spraying. <i>Acta Materialia</i> , <b>2004</b> , 52, 199-208	8.4	30	
140	Development of microstructure in spray formed alloys. <i>Progress in Materials Science</i> , <b>1997</b> , 42, 373-392	42.2	29	
139	Modelling the shape and thermal dynamics of Ni superalloy rings during spray forming. Part 2: Thermal modelling [Heat flow and solidification. <i>Acta Materialia</i> , <b>2008</b> , 56, 1597-1608	8.4	29	
138	Evolution of Fe Bearing Intermetallics During DC Casting and Homogenization of an Al-Mg-Si Al Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2016</b> , 47, 300	0 <del>∂:</del> 301	4 <sup>28</sup>	
137	Charge storage properties of a EMoO3/carboxyl-functionalized single-walled carbon nanotube composite electrode in a Li ion electrolyte. <i>Electrochimica Acta</i> , <b>2013</b> , 98, 294-302	6.7	28	
136	Modelling of droplet dynamic and thermal histories during spray forming III. Analysis of spray solid fraction. <i>Acta Metallurgica Et Materialia</i> , <b>1995</b> , 43, 913-921		28	
135	An implicit parallel multigrid computing scheme to solve coupled thermal-solute phase-field equations for dendrite evolution. <i>Journal of Computational Physics</i> , <b>2012</b> , 231, 1781-1796	4.1	27	
134	Multiphysics modelling of the spray forming process. <i>Materials Science &amp; amp; Engineering A: Structural Materials: Properties, Microstructure and Processing,</i> <b>2008</b> , 477, 2-8	5.3	27	
133	The effect of inhomogeneities in particle distribution on the dielectric properties of composite films. <i>Journal Physics D: Applied Physics</i> , <b>2006</b> , 39, 1305-1311	3	26	
132	Alternative Fabrication Routes toward Oxide-Dispersion-Strengthened Steels and Model Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2016</b> , 47, 5313-532	24.3	25	
131	Manufacture of electrical and magnetic graded and anisotropic materials for novel manipulations of microwaves. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2015</b> , 373	3	24	

130	A particle image velocimetry investigation of in-flight and deposition behaviour of steel droplets during electric arc sprayforming. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 383, 137-145	5.3	24
129	Spray printing of self-assembled porous structures for high power battery electrodes. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 13133-13141	13	23
128	Microstructural evaluation of monolithic and continuous fibre reinforced Al-12wt.%Si produced by low pressure plasma spraying. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1999</b> , 265, 77-86	5.3	23
127	Modelling of Spray Forming. Cast Metals, 1991, 4, 140-151		23
126	A Solid-State Battery Cathode with a Polymer Composite Electrolyte and Low Tortuosity Microstructure by Directional Freezing and Polymerization. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 20023	8 <sup>2</sup> 1.8	23
125	Vacuum-deposited planar heterojunction polymer solar cells. <i>ACS Applied Materials &amp; Amp; Interfaces</i> , <b>2011</b> , 3, 11-5	9.5	22
124	Two-dimensional simulation of liquid metal spray deposition onto a complex surface: II. Splashing and redeposition. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2001</b> , 9, 111-127	2	22
123	Engineering the Membrane/Electrode Interface To Improve the Performance of Solid-State Supercapacitors. <i>ACS Applied Materials &amp; Supercapacitors</i> , 2016, 8, 20756-65	9.5	22
122	Micro-scale graded electrodes for improved dynamic and cycling performance of Li-ion batteries. Journal of Power Sources, <b>2019</b> , 413, 59-67	8.9	22
121	Two-dimensional simulation of liquid metal spray deposition onto a complex surface. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>1999</b> , 7, 553-571	2	21
120	An in situ powder neutron diffraction study of nano-precipitate formation during processing of oxide-dispersion-strengthened ferritic steels. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 582, 769-773	5.7	20
119	Interface topography and residual stress distributions in W coatings for fusion armour applications. <i>Materials Science &amp; amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2008</b> , 477, 35-42	5.3	20
118	Toward Low-Cost Grid Scale Energy Storage: Supercapacitors Based on Up-Cycled Industrial Mill Scale Waste. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2015</b> , 3, 2831-2838	8.3	19
117	A Split Ring Resonator Dielectric Probe for Near-Field Dielectric Imaging. <i>Scientific Reports</i> , <b>2017</b> , 7, 203	<b>8</b> 4.9	19
116	The microstructure of spray-formed Ti-6Al-4V/SiCf metal-matrix composites. <i>Journal of Microscopy</i> , <b>1993</b> , 169, 263-267	1.9	19
115	Layer-by-layer printing of multi-layered heterostructures using Li4Ti5O12 and Si for high power Li-ion storage. <i>Nano Energy</i> , <b>2019</b> , 61, 96-103	17.1	18
114	Large arc voltage fluctuations and droplet formation in electric arc wire spraying. <i>Powder Metallurgy</i> , <b>2003</b> , 46, 229-235	1.9	18
113	Microstructure of spray-formed Al alloy 2618. <i>Materials &amp; Design</i> , <b>1993</b> , 14, 45-47		18

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112	In-situ X-ray radiography of primary Fe-rich intermetallic compound formation. <i>Acta Materialia</i> , <b>2020</b> , 196, 759-769	8.4	17	
111	Characterisation of electric arc spray formed Ni superalloy IN718. <i>Materials Science &amp;</i> Engineering A: Structural Materials: Properties, Microstructure and Processing, <b>2002</b> , 326, 79-91	5.3	17	
110	The response of SiC fibres to vacuum plasma spraying and vacuum hot pressing during the fabrication of titanium matrix composites. <i>Journal of Microscopy</i> , <b>1999</b> , 196, 162-74	1.9	17	
109	A Computer Model for Trajectories and Thermal Profiles of Atomised Droplets in Spray Forming. <i>Cast Metals</i> , <b>1990</b> , 3, 227-232		17	
108	Spray printing and optimization of anodes and cathodes for high performance Li-lon batteries. <i>Electrochimica Acta</i> , <b>2018</b> , 292, 546-557	6.7	17	
107	Interface microstructures in Ti-based composites using TiB2/C-coated and uncoated SiCf after short-term thermal exposure. <i>Composites</i> , <b>1994</b> , 25, 887-890		16	
106	Microstructural evolution at Cu/SnAgtu/Cu and Cu/SnAgtu/NiAu ball grid array interfaces during thermal ageing. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 613, 387-394	5.7	15	
105	Real-time synchrotron x-ray observations of equiaxed solidification of aluminium alloys and implications for modelling. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2015</b> , 84, 012014	0.4	15	
104	Interface effects during consolidation in titanium alloy components locally reinforced with matrix-coated fibre composite. <i>Acta Materialia</i> , <b>2002</b> , 50, 4981-4993	8.4	15	
103	Single-operation, multi-phase additive manufacture of electro-chemical double layer capacitor devices. <i>Additive Manufacturing</i> , <b>2019</b> , 28, 344-353	6.1	14	
102	Mapping of multi-elements during melting and solidification using synchrotron X-rays and pixel-based spectroscopy. <i>Scientific Reports</i> , <b>2015</b> , 5, 15988	4.9	14	
101	Infrared Thermal Imaging Measurement of Deposit Surface Temperatures During Spray Deposition. <i>Powder Metallurgy</i> , <b>1990</b> , 33, 144-146	1.9	14	
100	Single-Step Spray Printing of Symmetric All-Organic Solid-State Batteries Based on Porous Textile Dye Electrodes. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1901418	21.8	13	
99	Optimal Robot Path for Minimizing Thermal Variations in a Spray Deposition Process. <i>IEEE Transactions on Control Systems Technology</i> , <b>2007</b> , 15, 1-11	4.8	13	
98	Fibre re-arrangement and matrix softening phenomena in matrix-coated fibre (MCF) composites during vacuum hot pressing consolidation. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2003</b> , 346, 246-253	5.3	13	
97	Microstructural comparison of effects of hafnium and titanium additions in spark-plasma-sintered Fe-based oxide-dispersion strengthened alloys. <i>Journal of Nuclear Materials</i> , <b>2017</b> , 487, 433-442	3.3	12	
96	The Role of Grain Refiner in the Nucleation of AlFeSi Intermetallic Phases During Solidification of a 6xxx Aluminum Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2019</b> , 50, 5242-5252	2.3	12	
95	An in-situ method to estimate the tip temperature and phase selection of secondary Fe-rich intermetallics using synchrotron X-ray radiography. <i>Scripta Materialia</i> , <b>2018</b> , 149, 44-48	5.6	12	

94	Co-spray printing of LiFePO4 and PEO-Li1.5Al0.5Ge1.5(PO4)3 hybrid electrodes for all-solid-state Li-ion battery applications. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 19094-19103	13	12
93	Freeform Fabrication of Ceramics by Hot-Melt Ink-Jet Printing. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 625, 195		12
92	Spray-Printed and Self-Assembled Honeycomb Electrodes of Silicon-Decorated Carbon Nanofibers for Li-Ion Batteries. <i>ACS Applied Materials &amp; Amp; Interfaces</i> , <b>2019</b> , 11, 603-612	9.5	12
91	An inverse problem in modelling liquid metal spraying. <i>Applied Mathematical Modelling</i> , <b>2003</b> , 27, 379-3	<b>9.6</b> .5	11
90	Modelling and experimental analysis of vacuum plasma spraying. Part I: prediction of initial plasma properties at plasma gun exit. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2000</b> , 8, 497-513	2	11
89	Spray forming of Al/SiC metal matrix composites. <i>Journal of Microscopy</i> , <b>1995</b> , 177, 337-346	1.9	11
88	Preparation, microstructure and microwave dielectric properties of sprayed PFA/barium titanate composite films. <i>Composites Science and Technology</i> , <b>2016</b> , 129, 198-204	8.6	11
87	In-situ X-ray radiography of twinned crystal growth of primary Al13Fe4. <i>Scripta Materialia</i> , <b>2020</b> , 184, 57-62	5.6	11
86	An electrochemical microactuator based on highly textured LiCoO2. <i>Sensors and Actuators B: Chemical</i> , <b>2013</b> , 176, 52-57	8.5	10
85	NiZn ferrite/Fe hybrid epoxy-based composites: extending magnetic properties to high frequency. <i>Applied Physics A: Materials Science and Processing</i> , <b>2014</b> , 117, 477-483	2.6	10
84	Fe Bearing Intermetallic Phase Formation in a Wrought AlMgBi Alloy. <i>Transactions of the Indian Institute of Metals</i> , <b>2012</b> , 65, 553-557	1.2	10
83	Arc Sprayed Steel: Microstructure in Severe Substrate Features. <i>Journal of Thermal Spray Technology</i> , <b>2009</b> , 18, 256-271	2.5	10
82	Oxide formation in the Sprayform Tool Process. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 383, 50-57	5.3	10
81	Chemical interaction between sigma 1140+ SiC fibre and Ti-6Al-4V. <i>Scripta Materialia</i> , <b>2001</b> , 44, 607-612	5.6	10
80	Multi-layered composite electrodes of high power Li4Ti5O12 and high capacity SnO2 for smart lithium ion storage. <i>Energy Storage Materials</i> , <b>2021</b> , 38, 70-79	19.4	10
79	Overcoming diffusion limitations in supercapacitors using layered electrodes. <i>Journal of Power Sources</i> , <b>2019</b> , 433, 126579	8.9	9
78	Generalized Maxwell Fish-Eye Lens as a Beam Splitter: A Case Study in Realizing All-Dielectric Devices From Transformation Electromagnetics. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2017</b> , 65, 4823-4835	4.1	9
77	Spray Forming of Bulk Ultrafine-Grained Al-Fe-Cr-Ti. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2010</b> , 41, 3208-3215	2.3	9

## (2006-1996)

76	Manufacture of Hoop Reinforced Ti-MMC Rings by Spray/Wind Process. <i>Key Engineering Materials</i> , <b>1996</b> , 127-131, 335-342	0.4	9
75	Dynamic densification of metal matrix-coated fibre composites: modelling and processing. <i>Acta Materialia</i> , <b>2005</b> , 53, 617-628	8.4	9
74	Combining composition graded positive and negative electrodes for higher performance Li-ion batteries. <i>Journal of Power Sources</i> , <b>2020</b> , 448, 227376	8.9	9
73	. IEEE Transactions on Microwave Theory and Techniques, <b>2016</b> , 1-7	4.1	8
72	Heavily loaded ferrite-polymer composites to produce high refractive index materials at centimetre wavelengths. <i>APL Materials</i> , <b>2013</b> , 1, 042108	5.7	8
71	Fabrication and Electrical Properties of Bulk Textured LiCoO2. <i>Journal of the American Ceramic Society</i> , <b>2010</b> , 93, 1856	3.8	8
70	Refinement of TiB2 in Al-Ti-B Grain Refiner Alloys by Ultrasound and the Effect on Al Grain Size. <i>Materials Science Forum</i> , <b>2010</b> , 654-656, 958-961	0.4	8
69	Non-equilibrium microstructure and thermal stability of plasma-sprayed AlBi coatings. <i>Journal of Materials Research</i> , <b>2005</b> , 20, 2038-2045	2.5	8
68	Direct Ink-Jet Deposition of Ceramic Green Bodies: I - Formulation of Build Materials. <i>Materials Research Society Symposia Proceedings</i> , <b>1998</b> , 542, 141		8
67	Heat flow in spray-formed Al?4Cu. <i>Materials Science &amp; Dispersing A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1994</b> , 179-180, 72-76	5.3	8
66	In situ mapping of chemical segregation using synchrotron x-ray imaging. MRS Bulletin, 2020, 45, 934-94	<b>13</b> .2	8
65	Microstructural and mechanical characterisation of Fe-14Cr-0.22Hf alloy fabricated by spark plasma sintering. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 762, 678-687	5.7	8
64	Design of Scalable, Next-Generation Thick Electrodes: Opportunities and Challenges. <i>ACS Nano</i> , <b>2021</b> ,	16.7	8
63	Scalable, Large-Area Printing of Pore-Array Electrodes for Ultrahigh Power Electrochemical Energy Storage. <i>ACS Applied Materials &amp; amp; Interfaces</i> , <b>2019</b> , 11, 37859-37866	9.5	7
62	Evaluation of the Laguerre-Gaussian mode purity produced by three-dimensional-printed microwave spiral phase plates. <i>Royal Society Open Science</i> , <b>2020</b> , 7, 200493	3.3	7
61	Design and characterisation of ex situ bulk MgB2 superconductors containing a nanoscale dispersion of artificial pinning centres. <i>Superconductor Science and Technology</i> , <b>2020</b> , 33, 034006	3.1	7
60	Characterization of the residual stresses in spray-formed steels using neutron diffraction. <i>Scripta Materialia</i> , <b>2015</b> , 100, 82-85	5.6	7
59	Scientific, technological, and economic aspects of rapid tooling by electric arc spray forming.  Journal of Thermal Spray Technology, <b>2006</b> , 15, 796-801	2.5	7

58	Phase transformations and control of residual stresses in thick spray-formed steel shells.  Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2004, 35, 1113-1122	2.5	7
57	Process study, microstructure, and matrix cracking of SiC fiber reinforced MoSi2 based composites. Journal of Thermal Spray Technology, <b>2001</b> , 10, 584-591	2.5	7
56	Modelling and experimental analysis of vacuum plasma spraying. Part II: prediction of temperatures and velocities of plasma gases and Ti particles in a plasma jet. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2000</b> , 8, 515-540	2	7
55	High energy lithium ion capacitors using hybrid cathodes comprising electrical double layer and intercalation host multi-layers. <i>Energy Storage Materials</i> , <b>2020</b> , 33, 408-415	19.4	7
54	Modelling and neutron diffraction characterization of the interfacial bonding of spray formed dissimilar steels. <i>Acta Materialia</i> , <b>2018</b> , 155, 318-330	8.4	7
53	An Investigation of Novel Spraycast Al-Mg-Li-Zr-(Sc) Alloys. <i>Materials Science Forum</i> , <b>2006</b> , 519-521, 162	9⊙1∡634	4 6
52	Strength degradation of SiC fiber during manufacture of titanium matrix composites by plasma spraying and hot pressing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2001</b> , 32, 3133-3142	2.3	6
51	Experimental evaluation of 3D printed spiral phase plates for enabling an orbital angular momentum multiplexed radio system. <i>Royal Society Open Science</i> , <b>2019</b> , 6, 191419	3.3	6
50	Evolution of percolation properties in nanocomposite films during particle clustering. <i>Scripta Materialia</i> , <b>2007</b> , 56, 425-428	5.6	5
49	Ion microprobe studies of reactions in squeeze-cast aluminium alloy matrix composites. <i>Journal of Microscopy</i> , <b>1995</b> , 177, 414-423	1.9	5
48	Scalable polymer-based ferrite composites with matching permeability and permittivity for high-frequency applications. <i>Applied Physics A: Materials Science and Processing</i> , <b>2015</b> , 120, 609-614	2.6	4
47	A Synchrotron X-Ray Radiography Investigation of Induced Dendrite Fragmentation in Al-15wt%Cu. <i>Materials Science Forum</i> , <b>2013</b> , 765, 210-214	0.4	4
46	Phase field simulation of multi-dendrite growth in a coupled thermal-solute-convective environment. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2012</b> , 33, 012101	0.4	4
45	Hydrogen incorporation in Ti-based metalhatrix composites fabricated by vacuum plasma spraying and vacuum hot pressing. <i>Journal of Microscopy</i> , <b>1997</b> , 185, 132-145	1.9	4
44	Modeling the heat flow in spray formed steel shells for tooling applications. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , <b>2006</b> , 37, 1037-1047	2.5	4
43	Spray Forming of Al-Fe-Cr-Ti and Al-Si-Li Alloys. <i>Materials Science Forum</i> , <b>2007</b> , 561-565, 1075-1078	0.4	4
42	Modelling Shape Evolution and Heat Flow of Spray-Formed Ring Preforms. <i>Materials Science Forum</i> , <b>2005</b> , 475-479, 2807-2810	0.4	4
41	3D-printed []4 phase plate for broadband microwave applications. <i>Optics Express</i> , <b>2018</b> , 26, 29068-29073	33.3	4

### (2005-2020)

40	4D Bragg Edge Tomography of Directional Ice Templated Graphite Electrodes. <i>Journal of Imaging</i> , <b>2020</b> , 6,	3.1	4
39	The effects of irradiation on CrMnFeCoNi high-entropy alloy and its derivatives. <i>Progress in Materials Science</i> , <b>2021</b> , 100807	42.2	4
38	Numerical and physical simulation of rapid microstructural evolution of gas atomised Ni superalloy powders. <i>Materials and Design</i> , <b>2017</b> , 117, 157-167	8.1	3
37	Engineering the nanostructure of a polymer-nanocomposite film containing Ti-based core-shell particles to enhance dielectric response. <i>Nanoscale</i> , <b>2015</b> , 7, 15727-33	7.7	3
36	Core-shell nanoparticles and enhanced polarization in polymer based nanocomposite dielectrics. <i>Nanotechnology</i> , <b>2014</b> , 25, 475706	3.4	3
35	An AlBilli hierarchical metalihetal composite manufactured by co-spray forming. <i>Journal of Materials Processing Technology</i> , <b>2011</b> , 211, 2045-2049	5.3	3
34	Modeling the Deposition Dynamics of a Twin-Atomizer Spray Forming System. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , <b>2010</b> , 41, 303-307	2.5	3
33	Optimisation of Spray Forming Ni Superalloys via Process Modelling and On-Line Monitoring. <i>Materials Science Forum</i> , <b>2007</b> , 546-549, 1327-1332	0.4	3
32	Preliminary characterisation of a plasma sprayed MoSi2/Sigma SiC fibre monotape. <i>Materials Science &amp; Microstructure and Processing</i> , <b>1999</b> , 261, 196-203	5.3	3
31	The Manufacture of Squeeze Cast and Spray Formed Al MMCs. <i>Key Engineering Materials</i> , <b>1995</b> , 104-107, 155-174	0.4	3
30	Microstructure, Macrostructure, and Modelling of the Centrifugal Spray Deposition of Large Diameter Ni Superalloy Preforms <b>2004</b> ,		3
29	The Electric Arc Spray Manufacture of Rapid Production Tooling: A Case Study 1998,		3
28	Development of a Novel Melt Spinning-Based Processing Route for Oxide Dispersion-Strengthened Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2018</b> , 49, 604-612	2.3	2
27	2010,		2
26	Microstructure and property development in spray formed and extruded Al-Mg-Li-Zr alloys for aerospace and autosport applications. <i>Materialwissenschaft Und Werkstofftechnik</i> , <b>2010</b> , 41, 562-567	0.9	2
25	Nanoindentation of Lead Free Solders for Harsh Environments. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1079, 1		2
24	MODELLING FOR THERMAL CONTROL OF VACUUM PLASMA SPRAYING. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2005</b> , 38, 189-194		2
23	Numerical Heat Transfer Modelling in Spray Formed IN718 Billets. <i>Materials Science Forum</i> , <b>2005</b> , 475-479, 2803-2806	0.4	2

22	A Unified Computer Model of the Spray Forming Process of Inconel 718 Rings 2005,		2
21	In-line measurement of the dielectric permittivity of materials during additive manufacturing and 3D data reconstruction. <i>Additive Manufacturing</i> , <b>2020</b> , 32, 101010	6.1	2
20	Electron microscopy of multi-layered polymer-nanocomposite based dielectrics. <i>Journal of Physics: Conference Series</i> , <b>2014</b> , 522, 012041	0.3	1
19	Spatial transformations: from fundamentals to applications. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2015</b> , 373,	3	1
18	A hybrid arc spray forming technique for the manufacture of nickel superalloy IN617. <i>Materialwissenschaft Und Werkstofftechnik</i> , <b>2014</b> , 45, 758-764	0.9	1
17	Modelling and Experiments Concerning Dendrite Re-Melting and Its Role in Microstructural Evolution in Spray Formed Ni Superalloys. <i>Materials Science Forum</i> , <b>2010</b> , 654-656, 1363-1366	0.4	1
16	Numerical Modelling of Spray Formed Grain Size Evolution. <i>Materials Science Forum</i> , <b>2007</b> , 561-565, 19	915.1499	941
15	Semiempirical method for process analysis on electric arc spray forming of Fe-0.06%C steel rings. <i>Powder Metallurgy</i> , <b>2002</b> , 45, 139-145	1.9	1
14	Transmission electron microscopy study of Ti/SiCf composites fabricated by vacuum plasma spraying and vacuum hot-pressing. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>1995</b> , 72, 707-721		1
13	Nucleation bursts of primary intermetallic crystals in a liquid Al alloy studied using in situ synchrotron X-ray radiography. <i>Acta Materialia</i> , <b>2021</b> , 221, 117389	8.4	1
12	New nanoscale artificial pinning centres for NbTi superconductors. <i>Materials and Design</i> , <b>2021</b> , 198, 10	9285	1
11	Interfaces between Ceramic and Polymer Electrolytes: A Comparison of Oxide and Sulfide Solid Electrolytes for Hybrid Solid-State Batteries. <i>Inorganics</i> , <b>2022</b> , 10, 60	2.9	1
10	Scalable Multilayer Printing of Graphene Interfacial Layers for Ultrahigh Power Lithium-Ion Storage. <i>Energy Technology</i> , <b>2020</b> , 8, 2000253	3.5	0
9	Applied periodic lizontrol: Presenting prototype designs for a real sprayform tooling process. <i>Control Engineering Practice</i> , <b>2006</b> , 14, 1477-1493	3.9	O
8	Modelling the Impedance Response of Graded LiFePO4 Cathodes for Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , <b>2022</b> , 169, 010528	3.9	О
7	Joining and cycling performance of ultra-thick tungsten coatings on patterned steel substrates for fusion armour applications. <i>Materials and Design</i> , <b>2021</b> , 212, 110250	8.1	O
6	Investigating Metal Solidification with X-ray Imaging. <i>Metals</i> , <b>2022</b> , 12, 395	2.3	0
5	Microstructural Evolution in Spray Forming <b>2017</b> , 265-295		

#### LIST OF PUBLICATIONS

- Phase Field Modelling of Dendrite Fragmentation during Thermal Shock. *Materials Science Forum*, **2010**, 654-656, 1524-1527
- 0.4

- 3 Spray Processing of Ti Metal Matrix Composites **1995**, 109-121
- 2 Spray Casting **2008**, 382-385
- 1 Capacitors **2021**, 205-248