

# Simo-Pekka V Hannula

## List of Publications by Year in descending order

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107  
papers

2,960  
citations

147801

31  
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48  
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all docs

111  
docs citations

111  
times ranked

3462  
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards the additive manufacturing of Ni-Mn-Ga complex devices with magnetic field induced strain. Additive Manufacturing, 2022, 49, 102485.	3.0	4
2	Microstructure and Properties of Additively Manufactured AlCoCr <sub>0.75</sub> Cu <sub>0.5</sub> FeNi Multicomponent Alloy: Controlling Magnetic Properties by Laser Powder Bed Fusion via Spinodal Decomposition. Materials, 2022, 15, 1801.	2.9	1
3	Mechanical properties of pulsed electric current sintered CrFeNiMn equiatomic alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 842, 143071.	5.6	3
4	Hydrogen Effects in Equiatomic CrFeNiMn Alloy Fabricated by Laser Powder Bed Fusion. Metals, 2021, 11, 872.	2.3	7
5	Silica-silicon composites for near-infrared reflection: A comprehensive computational and experimental study. Ceramics International, 2021, 47, 16833-16840.	4.8	4
6	Mechanical and tribological properties of WO <sub>2.9</sub> and ZrO <sub>2</sub> + WO <sub>2.9</sub> composites studied by nanoindentation and reciprocating wear tests. Wear, 2021, 478-479, 203920.	3.1	3
7	Mechanical and optical properties of as-grown and thermally annealed titanium dioxide from titanium tetrachloride and water by atomic layer deposition. Thin Solid Films, 2021, 732, 138758.	1.8	17
8	Highly ordered CuSbS <sub>2</sub> nanotube arrays: Controlled synthesis and electrochemical properties. Materials Letters, 2021, 303, 130486.	2.6	0
9	Hierarchical Microstructure of Laser Powder Bed Fusion Produced Face-Centered-Cubic-Structured Equiatomic CrFeNiMn Multicomponent Alloy. Materials, 2020, 13, 4498.	2.9	8
10	Phase structures of gas atomized equiatomic CrFeNiMn high entropy alloy powder. Journal of Alloys and Compounds, 2020, 827, 154142.	5.5	24
11	Cold Gas Spraying of a High-Entropy CrFeNiMn Equiatomic Alloy. Coatings, 2020, 10, 53.	2.6	32
12	Round Robin into Best Practices for the Determination of Indentation Size Effects. Nanomaterials, 2020, 10, 130.	4.1	18
13	Robustness of Adamussium colbecki shell to ocean acidification in a short-term exposure. Marine Environmental Research, 2019, 149, 90-99.	2.5	8
14	Effect of process parameters on non-modulated Ni-Mn-Ga alloy manufactured using powder bed fusion. Additive Manufacturing, 2019, 28, 464-474.	3.0	19
15	Effect of sulfonating agent and ligand chemistry on structural and optical properties of CuSbS <sub>2</sub> particles prepared by heat-up method. CrystEngComm, 2018, 20, 1527-1535.	2.6	12
16	Tribological properties of thin films made by atomic layer deposition sliding against silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	7
17	Platelet CuSbS <sub>2</sub> particles with a suitable conduction band position for solar cell applications. Materials Letters, 2018, 215, 157-160.	2.6	21
18	Comparison of magnetic field controlled damping properties of single crystal Ni-Mn-Ga and Ni-Mn-Ga polymer hybrid composite structures. Composites Science and Technology, 2018, 160, 138-144.	7.8	12

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19	Solution synthesis of CuSbS <sub>2</sub> nanocrystals: A new approach to control shape and size. <i>Journal of Alloys and Compounds</i> , 2018, 736, 190-201.	5.5	17
20	Effect of Morphology and Crystal Structure on the Thermal Conductivity of Titania Nanotubes. <i>Nanoscale Research Letters</i> , 2018, 13, 212.	5.7	6
21	Silica&ndash;gentamicin nanohybrids: combating antibiotic resistance, bacterial biofilms, and in vivo toxicity. <i>International Journal of Nanomedicine</i> , 2018, Volume 13, 7939-7957.	6.7	18
22	Effects of silica&ndash;gentamicin nanohybrids on osteogenic differentiation of human osteoblast-like SaOS-2 cells. <i>International Journal of Nanomedicine</i> , 2018, Volume 13, 877-893.	6.7	18
23	Control of the Size of Silver Nanoparticles and Release of Silver in Heat Treated SiO <sub>2</sub> -Ag Composite Powders. <i>Materials</i> , 2018, 11, 80.	2.9	39
24	Effect of Ethanol on Ag@Mesoporous Silica Formation by In Situ Modified StÅrber Method. <i>Nanomaterials</i> , 2018, 8, 362.	4.1	23
25	Titania nanotubes prepared by rapid breakdown anodization for photocatalytic decolorization of organic dyes under UV and natural solar light. <i>Nanoscale Research Letters</i> , 2018, 13, 179.	5.7	14
26	Preparation and Photocatalytic Activity of Quaternary GO/TiO <sub>2</sub> /Ag/AgCl Nanocomposites. <i>Water, Air, and Soil Pollution</i> , 2017, 228, 1.	2.4	15
27	Titania nanotube powders obtained by rapid breakdown anodization in perchloric acid electrolytes. <i>Journal of Solid State Chemistry</i> , 2017, 249, 189-198.	2.9	12
28	Aluminum oxide/titanium dioxide nanolaminates grown by atomic layer deposition: Growth and mechanical properties. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017, 35, .	2.1	38
29	Spray Forming of Steels. , 2017, , 463-495.		1
30	Highly porous spark plasma sintered Ni-Mn-Ga structures. <i>Scripta Materialia</i> , 2017, 139, 148-151.	5.2	19
31	Nanosilver&ndash;Silica Composite: Prolonged Antibacterial Effects and Bacterial Interaction Mechanisms for Wound Dressings. <i>Nanomaterials</i> , 2017, 7, 261.	4.1	45
32	Silica-Gentamicin Nanohybrids: Synthesis and Antimicrobial Action. <i>Materials</i> , 2016, 9, 170.	2.9	24
33	Crystal structure and photocatalytic properties of titanate nanotubes prepared by chemical processing and subsequent annealing. <i>Journal of Materials Science</i> , 2016, 51, 7322-7335.	3.7	24
34	Thermal conductivity of amorphous Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> nanolaminates deposited by atomic layer deposition. <i>Nanotechnology</i> , 2016, 27, 445704.	2.6	27
35	Properties of the pulsed electric current sintered Ni&ndash;Mn&ndash;Ga&ndash;Co&ndash;WC composites. <i>Journal of Alloys and Compounds</i> , 2016, 656, 408-415.	5.5	6
36	Al <sub>2</sub> O <sub>3</sub> &ndash;cBN composites sintered by SPS and HPHT methods. <i>Journal of the European Ceramic Society</i> , 2016, 36, 1783-1789.	5.7	56

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37	Microstructural Comparison of Spray-Formed and Conventionally Cast 2.5Cr High-Chromium White Iron. <i>Metallography, Microstructure, and Analysis</i> , 2015, 4, 261-272.	1.0	4
38	Characterization of Gas Atomized Ni-Mn-Ga Powders. <i>Materials Today: Proceedings</i> , 2015, 2, S879-S882.	1.8	13
39	Design, Synthesis, and Characterization of Hybrid Materials. <i>Advances in Materials Science and Engineering</i> , 2015, 2015, 1-2.	1.8	0
40	Friction behavior of alumina/molybdenum composites and formation of MoO <sub>3</sub> phase at 400°C. <i>Tribology International</i> , 2015, 87, 23-31.	5.9	37
41	Combined sol-gel and carbothermal synthesis of Zr-TiC powders for composites. <i>Materials Chemistry and Physics</i> , 2015, 153, 301-306.	4.0	24
42	Stress-induced transition from modulated 14M to non-modulated martensite in Ni-Mn-Ga alloy. <i>Acta Materialia</i> , 2015, 90, 151-160.	7.9	37
43	Tuning the Mechanical and Adsorption Properties of Silica with Graphene Oxide. <i>ChemPlusChem</i> , 2014, 79, 1512-1522.	2.8	14
44	Aluminum oxide from trimethylaluminum and water by atomic layer deposition: The temperature dependence of residual stress, elastic modulus, hardness and adhesion. <i>Thin Solid Films</i> , 2014, 552, 124-135.	1.8	155
45	Mechanical and Thermal Properties of Pulsed Electric Current Sintered (PECS) Cu-Diamond Compacts. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014, 45, 489-496.	2.1	3
46	Thermal and plasma enhanced atomic layer deposition of SiO <sub>2</sub> using commercial silicon precursors. <i>Thin Solid Films</i> , 2014, 558, 93-98.	1.8	66
47	The magnetic and oxidation behavior of bare and silica-coated iron oxide nanoparticles synthesized by reverse co-precipitation of ferrous ion (Fe <sup>2+</sup> ) in ambient atmosphere. <i>Journal of Magnetism and Magnetic Materials</i> , 2014, 353, 15-22.	2.3	50
48	Lubricating properties of silica/graphene oxide composite powders. <i>Carbon</i> , 2014, 79, 227-235.	10.3	53
49	Densification and characterization of spark plasma sintered Zr-ZrO <sub>2</sub> composites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 597, 75-81.	5.6	24
50	Formation Mechanisms, Structure, and Properties of HVOF-Sprayed WC-CoCr Coatings: An Approach Toward Process Maps. <i>Journal of Thermal Spray Technology</i> , 2014, 23, 1009-1018.	3.1	51
51	On the reliability of nanoindentation hardness of Al <sub>2</sub> O <sub>3</sub> films grown on Si-wafer by atomic layer deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014, 32, 01A116.	2.1	10
52	Microstructural and mechanical characteristics of Cu-Cu <sub>2</sub> O composites compacted with pulsed electric current sintering and hot isostatic pressing. <i>Composites Part A: Applied Science and Manufacturing</i> , 2013, 45, 61-69.	7.6	18
53	Nanoscale surface properties of a Ni-Mn-Ga 10M magnetic shape memory alloy. <i>Journal of Alloys and Compounds</i> , 2013, 577, S367-S371.	5.5	14
54	In situ TEM study of deformation twinning in Ni-Mn-Ga non-modulated martensite. <i>Acta Materialia</i> , 2013, 61, 5290-5299.	7.9	50

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55	Microstructure and tribological properties of pulsed electric current sintered alumina-zirconia nanocomposites with different solid lubricants. <i>Ceramics International</i> , 2013, 39, 2093-2105.	4.8	32
56	Twinning in shear and uniaxial loading in five layered martensite Ni-Mn-Ga single crystals. <i>European Physical Journal B</i> , 2013, 86, 1.	1.5	2
57	Influence of sintering temperature on the properties of pulsed electric current sintered hybrid coreshell powders. <i>Journal of the European Ceramic Society</i> , 2013, 33, 2233-2239.	5.7	1
58	Effects of the sliding conditions on the tribological behavior of atmospheric plasma sprayed Al <sub>2</sub> O <sub>3</sub> -15 wt.% ZrO <sub>2</sub> -CaF <sub>2</sub> composite coating. <i>Surface and Coatings Technology</i> , 2012, 210, 127-134.	4.8	15
59	Effect of Synthesis Time on Morphology of Hollow Porous Silica Microspheres. <i>Medziagotyra</i> , 2012, 18, .	0.2	3
60	Influence of different synthesis approach on doping behavior of silver nanoparticles onto the iron oxide-silica coreshell surfaces. <i>Journal of Nanoparticle Research</i> , 2012, 14, 1.	1.9	7
61	Novel iron oxide-silica coreshell powders compacted by using pulsed electric current sintering: Optical and magnetic properties. <i>Journal of the European Ceramic Society</i> , 2012, 32, 2981-2988.	5.7	4
62	Microstructure and properties of Ni-Mn-Ga alloys produced by rapid solidification and pulsed electric current sintering. <i>Journal of Alloys and Compounds</i> , 2011, 509, 5981-5987.	5.5	22
63	Optimization and Characterization of High Velocity Oxy-fuel Sprayed Coatings: Techniques, Materials, and Applications. <i>Coatings</i> , 2011, 1, 17-52.	2.6	158
64	Stabilizing internal stress as the thermodynamic factor of martensite aging effects. <i>Acta Materialia</i> , 2011, 59, 3593-3601.	7.9	18
65	The Microstructural Effects on the Mechanical and Thermal Properties of Pulsed Electric Current Sintered Cu-Al <sub>2</sub> O <sub>3</sub> Composites. <i>Procedia Engineering</i> , 2011, 10, 124-129.	1.2	31
66	Optical and structural properties of nanocrystalline anatase (TiO <sub>2</sub> ) thin films prepared by non-aqueous sol-gel dip-coating. <i>Thin Solid Films</i> , 2011, 519, 5882-5886.	1.8	42
67	Behavior of HVOF WC-10Co4Cr Coatings with Different Carbide Size in Fine and Coarse Particle Abrasion. <i>Journal of Thermal Spray Technology</i> , 2010, 19, 368-377.	3.1	54
68	Twin boundary nucleation and motion in Ni-Mn-Ga magnetic shape memory material with a low twinning stress. <i>Scripta Materialia</i> , 2010, 62, 9-12.	5.2	54
69	Spark plasma sintering of submicron-sized Cu-powder-Influence of processing parameters and powder oxidization on microstructure and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 2733-2737.	5.6	27
70	Probing structure and microstructure of epitaxial Ni-Mn-Ga films by reciprocal space mapping and pole figure measurements. <i>Acta Materialia</i> , 2010, 58, 6665-6671.	7.9	13
71	Recent Development of the Magnetic Shape Memory Materials Research in Finland. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1200, 26.	0.1	0
72	The correlation of material characteristics and wear in a laboratory scale cone crusher. <i>Wear</i> , 2009, 267, 568-575.	3.1	21

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73	Processing of hybrid materials for components with improved life-time. <i>Current Applied Physics</i> , 2009, 9, S160-S166.	2.4	10
74	The role of anisotropic thermal expansion of shape memory alloys in their functional properties. <i>Acta Materialia</i> , 2009, 57, 5605-5612.	7.9	20
75	DMA testing of Ni-Mn-Ga/polymer composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2009, 40, 125-129.	7.6	55
76	In situ fabrication of waveguide-compatible glass-embedded silver nanoparticle patterns by masked ion-exchange process. <i>Journal of Non-Crystalline Solids</i> , 2009, 355, 2224-2227.	3.1	11
77	Process study on the formation of nanocrystalline $\gamma$ -alumina with novel morphology at 1000 $^{\circ}\text{C}$ . <i>Journal of Materials Chemistry</i> , 2009, 19, 1915.	6.7	14
78	In-situ TEM straining of tetragonal martensite of Ni-Mn-Ga alloy. , 2009, , .		3
79	Development of precision spray forming for rapid tooling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 477, 63-68.	5.6	29
80	Nanocrystalline $\gamma$ -alumina with novel morphology at 1000 $^{\circ}\text{C}$ . <i>Journal of Materials Chemistry</i> , 2008, 18, 2423.	6.7	21
81	Magnetic shape memory effect in thin foils. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	44
82	Comparison between plasma- and HVOF-sprayed ceramic coatings. Part I: microstructure and mechanical properties. <i>International Journal of Surface Science and Engineering</i> , 2007, 1, 38.	0.4	52
83	Comparison between plasma- and HVOF-sprayed ceramic coatings. Part II: tribological behaviour. <i>International Journal of Surface Science and Engineering</i> , 2007, 1, 62.	0.4	21
84	A piezopaint-based sensor for monitoring structure dynamics. <i>Smart Materials and Structures</i> , 2007, 16, 2571-2576.	3.5	66
85	Abrasive wear properties of tool steel matrix composites in rubber wheel abrasion test and laboratory cone crusher experiments. <i>Wear</i> , 2007, 263, 180-187.	3.1	18
86	Neutron diffraction studies of magnetic-shape memory Ni-Mn-Ga single crystal. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 316, 386-389.	2.3	6
87	On the role of particle state and deposition procedure on mechanical, tribological and dielectric response of high velocity oxy-fuel sprayed alumina coatings. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 415, 1-11.	5.6	64
88	Stress dependence of magnetic shape memory effect and its model. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 438-440, 1003-1006.	5.6	14
89	Parameter optimization of HVOF sprayed nanostructured alumina and alumina-nickel composite coatings. <i>Surface and Coatings Technology</i> , 2006, 200, 4987-4994.	4.8	70
90	Magnetic domain evolution with applied field in a Ni-Mn-Ga magnetic shape memory alloy. <i>Scripta Materialia</i> , 2006, 54, 2155-2160.	5.2	49

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91	Magnetic indication of the stress-induced martensitic transformation in ferromagnetic Ni-Mn-Ga alloy. Journal of Magnetism and Magnetic Materials, 2006, 302, 387-390.	2.3	17
92	Investigation of magnetic domains in Ni-Mn-Ga alloys with a scanning electron microscope. Smart Materials and Structures, 2005, 14, S211-S215.	3.5	14
93	Magnetic shape memory fatigue. , 2005, 5761, 513.		13
94	Recent breakthrough development of the magnetic shape memory effect in Ni-Mn-Ga alloys. Smart Materials and Structures, 2005, 14, S223-S235.	3.5	124
95	Tensile/compressive behaviour of non-layered tetragonal Ni <sub>52.8</sub> Mn <sub>25.7</sub> Ga <sub>21.5</sub> alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 27-33.	5.6	12
96	Anomalous Surface Deformation of Sapphire Clarified by 3D-FEM Simulation of the Nanoindentation. JSME International Journal Series A-Solid Mechanics and Material Engineering, 2003, 46, 265-271.	0.4	7
97	Microstructures and mechanical properties of sprayformed white irons. International Journal of Cast Metals Research, 2003, 16, 333-337.	1.0	2
98	Synthesis of silver powder using a mechanochemical process. Applied Organometallic Chemistry, 2001, 15, 393-395.	3.5	30
99	Porosity of thin diamond-like carbon films deposited by an arc discharge method. Surface and Coatings Technology, 1993, 62, 356-360.	4.8	17
100	A comparative study of the corrosion performance of TiN, Ti(B,N) and (Ti,Al)N coatings produced by physical vapour deposition methods. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 140, 722-726.	5.6	64
101	Identification of factors affecting the aqueous corrosion properties of (Ti, Al) N-coated steel. Surface and Coatings Technology, 1991, 49, 353-358.	4.8	32
102	Corrosion performance of some titanium-based hard coatings. Surface and Coatings Technology, 1991, 49, 489-495.	4.8	164
103	Surface structure and properties of ion-nitrided austenitic stainless steels. Thin Solid Films, 1989, 181, 343-350.	1.8	98
104	Influence of nitrogen alloying on hydrogen embrittlement in AISI 304-type stainless steels. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1984, 15, 2205-2211.	1.4	38
105	Determination of Time-Dependent Plastic Properties of Metals by Indentation Load Relaxation Techniques. Materials Research Society Symposia Proceedings, 1984, 40, 217.	0.1	14
106	The effect of pre-existing epsilon-martensite on the hydrogen induced fracture of austenitic stainless steel. Scripta Metallurgica, 1983, 17, 509-513.	1.2	8
107	X-Ray and High Resolution Transmission Electron Microscopy studies of Tetragonal Martensite of Ni-Mn-Ga Alloys. , 0, , 627-631.		6