

# Natarajan Selvakumar

## List of Publications by Year in descending order

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Version: 2024-02-01

107  
papers

3,301  
citations

159585

30  
h-index

161849

54  
g-index

108  
all docs

108  
docs citations

108  
times ranked

2829  
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental investigation on mechanical behaviour, modelling and optimization of wear parameters of B4C and graphite reinforced aluminium hybrid composites. <i>Materials &amp; Design</i> , 2014, 63, 620-632.	5.1	261
2	Effect of nano/micro B4C particles on the mechanical properties of aluminium metal matrix composites fabricated by ultrasonic cavitation-assisted solidification process. <i>Archives of Civil and Mechanical Engineering</i> , 2016, 16, 147-158.	3.8	192
3	Application of factorial techniques to study the wear of Al hybrid composites with graphite addition. <i>Materials &amp; Design</i> , 2012, 39, 42-54.	5.1	177
4	Mechanical behavior and wear prediction of stir cast Al <sup>6061</sup> /TiB <sub>2</sub> composites using response surface methodology. <i>Materials &amp; Design</i> , 2014, 59, 383-396.	5.1	164
5	Automatic Defect Classification in Ultrasonic NDT Using Artificial Intelligence. <i>Journal of Nondestructive Evaluation</i> , 2011, 30, 20-28.	2.4	129
6	TiAlN <sup>1</sup> •TiAlON <sup>2</sup> •Si <sub>3</sub> N <sub>4</sub> tandem absorber for high temperature solar selective applications. <i>Applied Physics Letters</i> , 2006, 89, 191909.	3.3	119
7	Enhancement in growth rate and productivity of spinach grown in hydroponics with iron oxide nanoparticles. <i>RSC Advances</i> , 2016, 6, 15451-15459.	3.6	105
8	Carbon Nanotube <sup>1</sup> -Based Tandem Absorber with Tunable Spectral Selectivity: Transition from Near <sup>2</sup> -Perfect Blackbody Absorber to Solar Selective Absorber. <i>Advanced Materials</i> , 2014, 26, 2552-2557.	21.0	95
9	Thermal, electrical and wear behavior of sintered Cu <sup>1</sup> -W nanocomposite. <i>Materials &amp; Design</i> , 2013, 46, 16-25.	5.1	94
10	Effect of graphite addition on mechanical behavior of Al <sup>6061</sup> /TiB <sub>2</sub> hybrid composite using acoustic emission. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 612, 16-27.	5.6	85
11	Numerical modelling, prediction of Cu <sup>1</sup> -W nano powder composite in dry sliding wear condition using response surface methodology. <i>Materials &amp; Design</i> , 2013, 50, 977-996.	5.1	82
12	Design and fabrication of highly thermally stable HfMoN/HfON/Al <sub>2</sub> O <sub>3</sub> tandem absorber for solar thermal power generation applications. <i>Solar Energy Materials and Solar Cells</i> , 2012, 102, 86-92.	6.2	79
13	Optimizing wear behavior of TiN coated SS 316L against Ti alloy using Response Surface Methodology. <i>Materials &amp; Design</i> , 2015, 67, 469-482.	5.1	76
14	Spectroscopic ellipsometric characterization of TiAlN/TiAlON/Si <sub>3</sub> N <sub>4</sub> tandem absorber for solar selective applications. <i>Applied Surface Science</i> , 2008, 254, 1694-1699.	6.1	73
15	Optimization and Effect of Weight Fraction of MoS <sub>2</sub> on the Tribological Behavior of Mg-TiC-MoS <sub>2</sub> Hybrid Composites. <i>Tribology Transactions</i> , 2016, 59, 733-747.	2.0	66
16	Smart coating for corrosion protection by adopting nano particles. <i>Progress in Organic Coatings</i> , 2012, 74, 461-469.	3.9	62
17	Microstructure and mechanical characterization of (B <sub>4</sub> C+ h-BN)/Al hybrid nanocomposites processed by ultrasound assisted casting. <i>International Journal of Mechanical Sciences</i> , 2018, 144, 814-826.	6.7	62
18	Tensile, compressive and wear behaviour of self-lubricating sintered magnesium based composites. <i>Transactions of Nonferrous Metals Society of China</i> , 2017, 27, 312-323.	4.2	56

#	ARTICLE	IF	CITATIONS
19	Structure and properties of titania reinforced nano-hydroxyapatite/gelatin bio-composites for bone graft materials. <i>Ceramics International</i> , 2012, 38, 571-579.	4.8	55
20	Experimental and prediction of sintered Cu-W composite by using artificial neural networks. <i>Materials &amp; Design</i> , 2013, 45, 323-335.	5.1	55
21	Fabrication and Characterization of Organic and In-Organic Reinforced A356 Aluminium Matrix Hybrid Composite by Improved Double-Stir Casting. <i>Silicon</i> , 2019, 11, 817-829.	3.3	55
22	Effect of substrate roughness on the apparent surface free energy of sputter deposited superhydrophobic polytetrafluoroethylene coatings: A comparison of experimental data with different theoretical models. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	53
23	Electrical resistivity, wear map and modeling of extruded tungsten reinforced copper composite. <i>Materials &amp; Design</i> , 2014, 56, 791-806.	5.1	53
24	Fabrication of water repellent cotton fabric by coating nano particle impregnated hydrophobic additives and its characterization. <i>Journal of Industrial and Engineering Chemistry</i> , 2016, 37, 180-189.	5.8	47
25	Deformation Behavior of Cold Upset Forming of Sintered Al-Fe Composite Preforms. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2005, 127, 251-256.	1.4	45
26	Effect of Hybridizing MoS <sub>2</sub> on the Tribological Behaviour of Mg-TiC Composites. <i>Transactions of the Indian Institute of Metals</i> , 2015, 68, 911-925.	1.5	44
27	Comparative study of hydroxyapatite/gelatin composites reinforced with bio-inert ceramic particles. <i>Ceramics International</i> , 2012, 38, 3569-3582.	4.8	37
28	Investigation on the Electrical Properties of Polymer metal Nanocomposites for Physiological Sensing Applications. <i>Physics Procedia</i> , 2013, 49, 67-78.	1.2	37
29	Effect of Hybridizing and Optimization of TiC on the Tribological Behavior of Mg-MoS <sub>2</sub> Composites. <i>Journal of Tribology</i> , 2017, 139, .	1.9	37
30	Phenomenon of strain hardening behaviour of sintered aluminium preforms during cold axial forming. <i>Journal of Materials Processing Technology</i> , 2003, 142, 347-354.	6.3	36
31	Evaluation of corrosion inhibition in mild steel using cerium oxide nanoparticles. <i>Materials Letters</i> , 2013, 91, 78-80.	2.6	31
32	Thermal and sensitivity analysis of nano aluminium powder for firework application. <i>Journal of Thermal Analysis and Calorimetry</i> , 2011, 105, 259-267.	3.6	27
33	Experimental Analysis of Al-TiC Sintered Nanocomposite on EDM Process Parameters Using ANOVA. <i>Materials and Manufacturing Processes</i> , 2016, 31, 802-812.	4.7	27
34	Effect of weight percentage of TiC on their tribological properties of magnesium composites. <i>Materials Today: Proceedings</i> , 2018, 5, 6570-6578.	1.8	26
35	Minimum ignition energy for micro and nano flash powders. <i>Process Safety Progress</i> , 2012, 31, 19-23.	1.0	25
36	Flame-retardant fabric systems based on electrospun polyamide/boric acid nanocomposite fibers. <i>Journal of Applied Polymer Science</i> , 2012, 126, 614-619.	2.6	25

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37	Effect of milled B4C nanoparticles on tribological analysis, microstructure and mechanical properties of Cu-4Cr matrix produced by hot extrusion. Archives of Civil and Mechanical Engineering, 2017, 17, 446-456.	3.8	25
38	Enhancement in Thermal and Tensile Properties of ZrO <sub>2</sub> /Poly(Vinyl Alcohol) Nanocomposite Film. Materials Express, 2011, 1, 329-335.	0.5	24
39	Impact of nano particles on safety and environment for fireworks chemicals. Chemical Engineering Research and Design, 2014, 92, 732-738.	5.6	23
40	Mechanical Behaviour of Sintered Cu-5%W Nano Powder Composite. Procedia Engineering, 2012, 38, 2874-2880.	1.2	22
41	Wettability of ZnO: A comparison of reactively sputtered; thermally oxidized and vacuum annealed coatings. Applied Surface Science, 2011, 257, 4410-4417.	6.1	21
42	Experimental investigation on workability and strain hardening behaviour of Fe-C-Mn sintered composites with different percentage of carbon and manganese content. Materials & Design, 2013, 49, 791-801.	5.1	21
43	Prediction of deformation characteristics of sintered aluminium preforms using neural networks. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 611-620.	2.0	20
44	Effects of High Temperature Wear Behaviour of Sintered Ti-6Al-4V Reinforced with Nano B4C Particle. Transactions of the Indian Institute of Metals, 2016, 69, 1267-1276.	1.5	20
45	Development of patient specific dental implant using 3D printing. Journal of Ambient Intelligence and Humanized Computing, 2021, 12, 3549-3558.	4.9	20
46	Investigation on Tribological and mechanical behaviour of AA6082-Graphene based composites with Ti particles. Materials Research Express, 2020, 7, 076514.	1.6	20
47	Experimental investigation on workability and strain hardening behaviour of Fe-C-0.5Mn sintered composites. Materials & Design, 2012, 41, 349-357.	5.1	19
48	Phenomenon of instantaneous strain hardening behaviour of sintered Al-Fe composite preforms during cold axial forming. Materials & Design, 2007, 28, 1358-1363.	5.1	18
49	Modelling the effect of particle size and iron content on forming of Al-Fe composite preforms using neural network. Materials & Design, 2007, 28, 119-130.	5.1	18
50	Mechanical analysis and high temperature wear behaviour of AlCrN/DLC coated titanium alloy. International Journal of Surface Science and Engineering, 2016, 10, 27.	0.4	18
51	High Temperature Wear Behaviour of Nano/Micro B4C Reinforced Aluminium Matrix Composites Fabricated by an Ultrasonic Cavitation-Assisted Solidification Process. Transactions of the Indian Institute of Metals, 2017, 70, 17-29.	1.5	18
52	Some aspects of cold upset forming of sintered aluminium preforms using different lubricants. Materials Science and Technology, 2004, 20, 485-489.	1.6	17
53	Workability studies on sintered Cu-10SiC preforms during cold axial upsetting. Materials & Design, 2012, 39, 1-8.	5.1	17
54	Electrochemical Impedance Spectroscopic Analysis of ZnS Nanorod Fabricated Using Butterfly Wings as Biotemplate. Acta Metallurgica Sinica (English Letters), 2015, 28, 103-109.	2.9	17

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55	Study on formability and strain hardening index: influence of particle size of boron carbide (B <sub>4</sub> C) in magnesium matrix composites fabricated by powder metallurgy technique. Materials Research Express, 2020, 7, 016597.	1.6	16
56	Effect of Particle Size of B <sub>4</sub> C Reinforcement on Ti-6Al-4V Sintered Composite Prepared by Mechanical Milling Method. Transactions of the Indian Ceramic Society, 2017, 76, 31-37.	1.0	14
57	Experimental analysis on nano scale flash powder composition in fireworks manufacturing. Journal of Thermal Analysis and Calorimetry, 2013, 113, 615-621.	3.6	12
58	Microstructure characterization and thermal properties of Al-TiC sintered nano composites. Applied Thermal Engineering, 2016, 107, 625-632.	6.0	12
59	Deformation Behavior of Sintered Fe-C-Mn Composite During Cold Upset Forming. Materials and Manufacturing Processes, 2011, 26, 1388-1392.	4.7	11
60	Effect of tungsten reinforcement on mechanical, tribological and corrosion behaviour of mechanically alloyed Co-25C Cermet nanocomposites. Materials Research Express, 2019, 6, 1165e4.	1.6	11
61	Enhancing the mechanical, wear behaviour of copper matrix composite with 2V-Gr as reinforcement. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2021, 235, 1405-1419.	1.8	11
62	Forming limit diagram and void coalescence analysis of AA5052 coated with molybdenum-based ceramic nanocomposites. Materials & Design, 2013, 52, 393-403.	5.1	10
63	Electrical Resistivity, Tribological Behaviour of Multiwalled Carbon Nanotubes and Nanoboron Carbide Particles Reinforced Copper Hybrid Composites for Pantograph Application. Advances in Materials Science and Engineering, 2016, 2016, 1-18.	1.8	10
64	Influence of nano ZrC content on tribological analysis, microstructure and mechanical properties of Cu-4Cr matrix composites produced by hot extrusion. Archives of Civil and Mechanical Engineering, 2016, 16, 537-552.	3.8	10
65	Enhancing the Properties of Al-WC Nanocomposites Using Liquid Metallurgy. Experimental Techniques, 2016, 40, 129-135.	1.5	10
66	Simplifying the powder metallurgy manufacturing process using soft computing tools. Applied Soft Computing Journal, 2015, 27, 191-204.	7.2	8
67	Role of component layers in designing carbon nanotubes-based tandem absorber on metal substrates for solar thermal applications. Solar Energy Materials and Solar Cells, 2016, 155, 397-404.	6.2	8
68	Microstructure, surface topography and sliding wear behaviour of titanium based coating on AISI 1040 steel by magnetron sputtering. Archives of Civil and Mechanical Engineering, 2017, 17, 281-292.	3.8	8
69	Investigation of Cu-SiC Composite Preforms during Cold Upsetting. Materials and Manufacturing Processes, 2011, 26, 826-831.	4.7	7
70	Optimizing the Dry Sliding Wear Behavior of Copper Hybrid Nano Composites Reinforced with MWCNTs and Nano B4C Using Full Factorial Design. Transactions of the Indian Institute of Metals, 2016, 69, 717-732.	1.5	7
71	Classification of steel microstructures using Modified Alternate Local Ternary Pattern. Materials Research Express, 2019, 6, 096539.	1.6	7
72	Neural network model for predicting strain hardening and densification constants of sintered aluminium preforms. Powder Metallurgy, 2004, 47, 261-266.	1.7	6

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73	Automatic detection of defects in ultrasonic testing using artificial neural network. International Journal of Microstructure and Materials Properties, 2010, 5, 561.	0.1	6
74	Experimental Investigations on the Densification and Deformation Behaviour of Al-TiB <sub>2</sub> Composite Preforms. Transactions of the Indian Institute of Metals, 2016, 69, 1059-1068.	1.5	6
75	Effect of vanadium on enhancing the mechanical and wear behaviour of copper by using stir casting technique. Materials Research Express, 2019, 6, 096531.	1.6	6
76	Numerical modelling on corrosion behaviour of molybdenum-based ceramic nanocomposite coated mild steel using response surface methodology. International Journal of Surface Science and Engineering, 2013, 7, 345.	0.4	5
77	Improved Thermal and Fire Retardant Behavior of Polyvinyl Alcohol Matrix Using Nanocomposites. International Journal of Nanoscience, 2019, 18, 1850025.	0.7	4
78	Surface structural features and wear analysis of a multilayer Ti <sub>6</sub> Al <sub>4</sub> V-B <sub>4</sub> C thin film coated AISI 1040 steel. Materials Research Express, 2020, 7, 016436.	1.6	4
79	Determination of hazard in truck manufacturing industry using hazard identification risk assessment technique. Materials Today: Proceedings, 2020, 27, 1858-1862.	1.8	4
80	Generalized Neural Network Model to Predict the Properties of Sintered Al - Fe Composite. , 2007, , .		3
81	Magnetic Flux Alignment Studies on Entrapped Ferrofluid Nanoparticles in Poly Vinyl Alcohol Matrix. Journal of Materials Science and Technology, 2013, 29, 903-908.	10.7	3
82	Ballistic behaviour of gun powder and flash powder for firework chemicals as a function of particle sizes. Measurement: Journal of the International Measurement Confederation, 2013, 46, 3202-3210.	5.0	3
83	Influence of alumina reinforcement on nano-hydroxyapatite/biopolymer composite for biomedical applications. International Journal of Polymer Analysis and Characterization, 2016, 21, 554-562.	1.9	3
84	ZrC-Impregnated Titanium-Based Coating as an Effective Lubricating Barrier for Artificial Hip Prosthesis. Materials Performance and Characterization, 2021, 10, 189-205.	0.3	3
85	Experimental investigation of mechanical and wear behaviour of Cu-V <sub>2</sub> O <sub>5</sub> -Gr(L) reinforced composites. Materials Letters, 2022, 306, 130925.	2.6	3
86	Effect of Calcination in Synthesis of Nano Hydroxyapatite for Bone Grafting. Materials and Manufacturing Processes, 0, , 141223092238008.	4.7	3
87	Synthesis and characterization of NiO-ZnO nanocomposite by a cost efficient self-combustion technique. Journal of Achievements in Materials and Manufacturing Engineering, 2016, 79, 13-18.	0.6	3
88	Some Aspects of Cold Upset Forming of Sintered Aluminum Preforms Using Different Lubricants. Powder Metallurgy and Metal Ceramics, 2004, 43, 349-354.	0.8	2
89	Workability Behaviour of Fe-C-Mn Sintered Composites. Transactions of the Indian Institute of Metals, 2016, 69, 1137-1139.	1.5	2
90	Effect of Particle Size on the Deformation Behaviour of Sintered Al-TiC Nano Composites. Transactions of the Indian Institute of Metals, 2017, 70, 2093-2102.	1.5	2

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91	Adhesion Behaviour, Nanohardness and Surface Roughness of Ti-6Al-4V/B4C Thin Films Grown on AISI 1040 Steel. Transactions of the Indian Institute of Metals, 2018, 71, 893-899.	1.5	2
92	Adaptive Selection of Top-m Retrieval Schemes for Data Fusion Using Tabu Search. , 2007, , .		1
93	Evaluating the effect of SiC content on iron-based nanocomposite. Journal of Experimental Nanoscience, 2011, 6, 557-566.	2.4	1
94	Enhancing Internet of Battle Things using Ultrasonic assisted Non-Destructive Testing (Technical) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50		1
95	A Novel Ultrasonic based NDT for smart analysis of material defects using IoT. , 2021, , .		1
96	Phenomenon of Workability Behaviour of Cu-SiC Sintered Preforms during Cold Upsetting. Materials and Manufacturing Processes, 0, , 141223092238008.	4.7	1
97	Pani-Magnetic Nanoparticles for EMI Shielding and Corrosion Resistance Application. Quantum Matter, 2016, 5, 26-30.	0.2	1
98	Some aspects on work hardening behaviour of Cu-5%SiC powder composites. , 2010, , .		0
99	Tribological Behaviour of Cu -5W Sintered Powder Composite. Advanced Materials Research, 0, 622-623, 1300-1304.	0.3	0
100	Indigenous development of ultra high vacuum (UHV) magnetron sputtering system for the preparation of Permalloy magnetic thin films. Journal of Physics: Conference Series, 2012, 390, 012081.	0.4	0
101	Studies on Formability Behaviour of Aluminium Alloy Sheets with Ceramic Nanocoatings. Advanced Materials Research, 2014, 984-985, 482-487.	0.3	0
102	Deep learning-based supervised and unsupervised neural networks for analysing the characteristics of powder composite preforms. International Journal of Modelling and Simulation, 2021, 41, 451-462.	3.3	0
103	Role of Knowledge Mining - A Density based Spatial Clustering of Application. , 2020, , .		0
104	Workability Behavior of Fe-C-Mn Sintered Composites for Different Aspect Ratio and Carbon Content. Materials and Manufacturing Processes, 0, , 141223092238008.	4.7	0
105	Neural Networks for Predicting the Wear Properties of Sintered Ti-6Al-4V Composite Reinforced with Nano B4C Particle and Classification using Data Mining Tools. International Journal of Computational & Neural Engineering, 0, , 40-48.	0.0	0
106	TG/DTA studies on the oxidation and thermal behaviour of Ti-6Al-4V-B4C coatings obtained by magnetron sputtering. Journal of Applied Research and Technology, 2020, 18, .	0.9	0
107	Enhancing the Properties of Al-WC Nanocomposites Using Liquid Metallurgy. Experimental Techniques, 2013, , n/a-n/a.	1.5	0