

# Sivasankaran Subbarayan

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5963766/publications.pdf>

Version: 2024-02-01

83  
papers

1,995  
citations

257450

24  
h-index

289244

40  
g-index

85  
all docs

85  
docs citations

85  
times ranked

1499  
citing authors

#	ARTICLE	IF	CITATIONS
1	X-ray peak broadening analysis of AA 6061100 $\hat{a}$ ~ $\hat{x}$ wt.% Al <sub>2</sub> O <sub>3</sub> nanocomposite prepared by mechanical alloying. Materials Characterization, 2011, 62, 661-672.	4.4	160
2	Dry sliding wear behaviour of AA 6351-ZrB <sub>2</sub> in situ composite at room temperature. Materials & Design, 2010, 31, 1526-1532.	5.1	111
3	Manufacturing Methods, Microstructural and Mechanical Properties Evolutions of High-Entropy Alloys: A Review. Metals and Materials International, 2020, 26, 1099-1133.	3.4	101
4	An investigation on flowability and compressibility of AA 6061100 $\hat{a}$ ~ $\hat{x}$ wt.% TiO <sub>2</sub> micro and nanocomposite powder prepared by blending and mechanical alloying. Powder Technology, 2010, 201, 70-82.	4.2	99
5	An investigation of the synthesis, consolidation and mechanical behaviour of Al 6061 nanocomposites reinforced by TiC via mechanical alloying. Materials & Design, 2014, 57, 394-404.	5.1	92
6	Investigation of infill-patterns on mechanical response of 3D printed poly-lactic-acid. Polymer Testing, 2020, 87, 106557.	4.8	90
7	Investigations on microstructure, mechanical, and tribological behaviour of AA 7075 $\hat{a}$ ~ $\hat{x}$ wt.% TiC composites for aerospace applications. Archives of Civil and Mechanical Engineering, 2019, 19, 428-438.	3.8	78
8	Synthesis, structure and sinterability of 6061 AA100 $\hat{a}$ ~ $\hat{x}$ wt.% TiO <sub>2</sub> composites prepared by high-energy ball milling. Journal of Alloys and Compounds, 2010, 491, 712-721.	5.5	68
9	Laser cladding process of Cobalt and Nickel based hard-micron-layers on 316L-stainless-steel-substrate. Materials and Manufacturing Processes, 2020, 35, 142-151.	4.7	51
10	Effect of alumina content on microstructures, mechanical, wear and machining behavior of Cu-10Zn nanocomposite prepared by mechanical alloying and hot-pressing. Journal of Alloys and Compounds, 2017, 709, 129-141.	5.5	46
11	Microstructural observation, consolidation and mechanical behaviour of AA 6061 nanocomposites reinforced by $\hat{I}^3$ -Al <sub>2</sub> O <sub>3</sub> nanoparticles. Advanced Powder Technology, 2015, 26, 139-148.	4.1	40
12	Modeling and Analysis of Mechanical Properties of Aluminium Alloy (A413) Processed through Squeeze Casting Route Using Artificial Neural Network Model and Statistical Technique. Advances in Materials Science and Engineering, 2015, 2015, 1-16.	1.8	38
13	Mechanical and Tribological Behaviour of Friction-Stir-Processed Al 6061 Aluminium Sheet Metal Reinforced with $\hat{\$}\{\{m\} Al\}_{2}\{\{m\} O\}_{3}\}/0.5,\{m\} Gr\}\hat{\$}$ Al <sub>2</sub> O <sub>3</sub> / 0.5 Gr Hybrid Surface Nanocomposite. Arabian Journal for Science and Engineering, 2015, 40, 559-569.	1.1	38
14	Influence of infill density on microstructure and flexural behavior of 3D printed PLA thermoplastic parts processed by fusion deposition modeling. AIMS Materials Science, 2019, 6, 1033-1048.	1.4	37
15	Experimental Investigation on Mechanical and Turning Behavior of Al 7075 $\hat{a}$ ~ $\hat{x}$ wt.% TiB <sub>2</sub> -1% Gr In Situ Hybrid Composite. Advances in Materials Science and Engineering, 2015, 2015, 1-14.	1.8	36
16	Experimental design and investigation on the mechanical behavior of novel 3D printed biocompatibility polycarbonate scaffolds for medical applications. Journal of Manufacturing Processes, 2018, 35, 479-491.	5.9	36
17	Fabrication and consolidation behavior of Al 6061 nanocomposite powders reinforced by multi-walled carbon nanotubes. Powder Technology, 2014, 258, 189-197.	4.2	34
18	Evaluation of compaction equations and prediction using adaptive neuro-fuzzy inference system on compressibility behavior of AA 6061100 $\hat{a}$ ~ $\hat{x}$ wt.% TiO <sub>2</sub> nanocomposites prepared by mechanical alloying. Powder Technology, 2011, 209, 124-137.	4.2	33

#	ARTICLE	IF	CITATIONS
19	Modeling and Analysis of Mechanical Properties of Aluminium Alloy (A413) Reinforced with Boron Carbide (B <sub>4</sub> C) Processed Through Squeeze Casting Process Using Artificial Neural Network Model and Statistical Technique. <i>Materials Today: Proceedings</i> , 2017, 4, 2008-2030.	1.8	33
20	Appraisal of tribological properties of A356 with 20% SiC composites under dry sliding condition. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2020, 42, 1.	1.6	31
21	Analysis of workability behavior of Al-SiC P/M composites using backpropagation neural network model and statistical technique. <i>Computational Materials Science</i> , 2009, 47, 46-59.	3.0	29
22	Microstructural evolutions and mechanical properties enhancement of AA 6063 alloy reinforced with Tungsten (W) nanoparticles processed by friction stir processing. <i>Materials Characterization</i> , 2021, 172, 110903.	4.4	29
23	Catalytic etherification of glycerol to tert-butyl glycerol ethers using tert-butanol over sulfonic acid functionalized mesoporous polymer. <i>RSC Advances</i> , 2016, 6, 82654-82660.	3.6	28
24	Modelling of wrinkling in deep drawing of different grades of annealed commercially pure aluminium sheets when drawn through a conical die using artificial neural network. <i>Materials &amp; Design</i> , 2009, 30, 3193-3205.	5.1	27
25	Microstructural evolutions and enhanced mechanical performance of novel Al-Zn die-casting alloys processed by squeezing and hot extrusion. <i>Journal of Materials Processing Technology</i> , 2021, 292, 117063.	6.3	26
26	Effect of strengthening mechanisms on cold workability and instantaneous strain hardening behavior during grain refinement of AA 6061-10wt.% TiO <sub>2</sub> composite prepared by mechanical alloying. <i>Journal of Alloys and Compounds</i> , 2010, 507, 236-244.	5.5	25
27	Synthesis and Mechanical Behavior of AA 6063-x wt. % Al <sub>2</sub> O <sub>3</sub> -1% Gr (x = 3, 6, 9 and 12wt. %) Hybrid Composites. <i>Procedia Engineering</i> , 2014, 97, 951-960.	1.2	25
28	Investigations on effect of process parameters of electrodeposited Ni-Al <sub>2</sub> O <sub>3</sub> composite coating using orthogonal array approach and mathematical modeling. <i>Archives of Civil and Mechanical Engineering</i> , 2016, 16, 168-177.	3.8	25
29	Strengthening Mechanisms on (Cu-10Zn) <sub>100-x</sub> wt% Al <sub>2</sub> O <sub>3</sub> (x=0, 3, 6, 9 and 12) Nanocomposites Prepared by Mechanical Alloying and Vacuum Hot Pressing: Influence of Reinforcement Content. <i>Transactions of the Indian Institute of Metals</i> , 2017, 70, 791-800.	1.5	25
30	Taguchi-based grey relational analysis for modeling and optimizing machining parameters through dry turning of Incoloy 800H. <i>Journal of Mechanical Science and Technology</i> , 2017, 31, 4159-4165.	1.5	24
31	Microstructure, cold workability and strain hardening behavior of trimodal AA 6061-TiO <sub>2</sub> nanocomposite prepared by mechanical alloying. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 6776-6787.	5.6	23
32	Microstructure and mechanical properties investigation on nanostructured Nickel 200 alloy using multi-axial forging. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 712, 772-779.	5.6	22
33	Experimental investigation on synthesis and structural characterization of Cu-Zn-x wt%Al <sub>2</sub> O <sub>3</sub> (x = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12) Compounds, 2016, 688, 518-526.	5.5	21
34	Effect of TiB <sub>2</sub> /Gr Hybrid Reinforcements in Al 7075 Matrix on Sliding Wear Behavior Analyzed by Response Surface Methodology. <i>Metals and Materials International</i> , 2021, 27, 1739-1755.	3.4	21
35	Comparative study of laser melting and pre-placed Ni-20% Cr alloying over nodular iron surface. <i>Archives of Civil and Mechanical Engineering</i> , 2020, 20, 1.	3.8	16
36	Optimization of Turning Parameters of Machining Incoloy 800H Superalloy Using Cryogenically Treated Multilayer CVD-Coated Tool. <i>Arabian Journal for Science and Engineering</i> , 2018, 43, 4977-4990.	3.0	14

#	ARTICLE	IF	CITATIONS
37	Mechanical properties enhancement in composite material structures of poly(lactide)/epoxy/milled glass fibers prepared by fused filament fabrication and solution casting. <i>Polymer Composites</i> , 2021, 42, 6847-6866.	4.6	14
38	Evaluation of Microstructures, Mechanical and Dry-Sliding Wear Performance of A356-(Fly Ash/SiCp) Hybrid Composites. <i>International Journal of Metalcasting</i> , 2022, 16, 2079-2096.	1.9	14
39	Effect of Nose Radius and Graphite Addition on Turning of AA 7075-ZrB <sub>2</sub> in-situ Composites. <i>Procedia Engineering</i> , 2014, 97, 582-589.	1.2	13
40	Effect of Graphite Particles in Drilling of Hybrid Aluminum Matrix Composite. <i>Procedia Engineering</i> , 2014, 97, 495-504.	1.2	13
41	Influence of B <sub>4</sub> C nanoparticles on mechanical behaviour of Silicon brass nanocomposite through mechanical alloying and hot pressing. <i>Ceramics International</i> , 2019, 45, 18691-18700.	4.8	12
42	Effect of boron carbide nano particles in CuSi <sub>4</sub> Zn <sub>14</sub> silicone bronze nanocomposites on matrix powder surface morphology and structural evolution via mechanical alloying. <i>Ceramics International</i> , 2019, 45, 3492-3501.	4.8	12
43	Synthesis, structure, and mechanical response of Cr <sub>0.26</sub> Fe <sub>0.24</sub> Al <sub>0.5</sub> and Cr <sub>0.15</sub> Fe <sub>0.14</sub> Al <sub>0.30</sub> Cu <sub>0.13</sub> Si <sub>0.28</sub> nanocrystallite entropy alloys. <i>Advanced Powder Technology</i> , 2020, 31, 2161-2177.	4.1	12
44	Synthesis, Microstructures and Mechanical Behaviour of Cr <sub>0.21</sub> Fe <sub>0.20</sub> Al <sub>0.41</sub> Cu <sub>0.18</sub> and Cr <sub>0.14</sub> Fe <sub>0.13</sub> Al <sub>0.26</sub> Cu <sub>0.11</sub> Si <sub>0.25</sub> Zn <sub>0.11</sub> Nanocrystallite Entropy Alloys Prepared by Mechanical Alloying and Hot-Pressing. <i>Metals and Materials International</i> , 2021, 27, 139-155.	3.4	12
45	An exploration on microstructural observation and mechanical behavior of nanocrystallite Al 7017 alloy via mechanical alloying and uniaxial hot pressing. <i>Materials Characterization</i> , 2021, 171, 110803.	4.4	12
46	Optimising biogas from food waste using a neural network model. <i>Proceedings of the Institution of Civil Engineers: Municipal Engineer</i> , 2017, 170, 221-229.	0.7	11
47	Optimization of WEDM process parameters by RSM in machining of stir cum squeeze cast A413/B <sub>4</sub> C composites. <i>SN Applied Sciences</i> , 2020, 2, 1.	2.9	11
48	Effect of boron carbide addition on strengthening mechanisms, cold workability and instantaneous strain hardening behaviour of Cu <sub>4</sub> Si <sub>14</sub> Zn nanocomposites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 787, 139538.	5.6	11
49	Investigation of the Microstructure and Compressibility of Biodegradable Fe-Mn-Cu/W/Co Nanostructured Alloy Powders Synthesized by Mechanical Alloying. <i>Materials</i> , 2021, 14, 3088.	2.9	11
50	A comprehensive exploration on the development of nano Y <sub>2</sub> O <sub>3</sub> dispersed in AA 7017 by mechanical alloying and hot-pressing technique. <i>Ceramics International</i> , 2021, 47, 22924-22938.	4.8	11
51	Evolution of microstructure and mechanical properties of [Cu <sub>10</sub> Ni] <sub>1</sub> Si <sub>3</sub> N <sub>4</sub> nanocomposites developed using mechanical alloying and spark plasma sintering. <i>Journal of Alloys and Compounds</i> , 2022, 899, 163319.	5.5	11
52	Structure and mechanical properties of in-situ synthesized Ti/TiO <sub>2</sub> /TiC hybrid composites through mechanical milling and spark plasma sintering. <i>Ceramics International</i> , 2022, 48, 11215-11227.	4.8	11
53	A Novel Sonochemical Synthesis of Metal Oxides Based Bhasmas. <i>Materials Science Forum</i> , 0, 754, 89-97.	0.3	10
54	Structural Characterization and Mechanical Behavior of Al 6061 Nanostructured Matrix Reinforced with TiO <sub>2</sub> Nanoparticles for Automotive Applications. , 0, , .		10

#	ARTICLE	IF	CITATIONS
55	Low-Velocity Impact Characteristics of 3D-Printed Poly-Lactic Acid Thermoplastic Processed by Fused Deposition Modeling. Transactions of the Indian Institute of Metals, 2020, 73, 1669-1677.	1.5	10
56	Synthesis, microstructural investigation and compaction behavior of Al <sub>0.3</sub> CrFeNiCo <sub>0.3</sub> Si <sub>0.4</sub> nanocrystalline high entropy alloy. Advanced Powder Technology, 2021, 32, 398-412.	4.1	10
57	OPTIMIZATION OF DRILLING PROCESS ON CARBON-FIBER REINFORCED PLASTICS USING GENETIC ALGORITHM. Surface Review and Letters, 2021, 28, 2050056.	1.1	10
58	Effect of process parameters in surface roughness during turning of GFRP pipes using PCD insert tool. Procedia Engineering, 2014, 97, 64-71.	1.2	9
59	Investigation on A356-20wt%SiC composites through mechanical stirring and ultra-sonic-assisted cavitation. Materials Research Express, 2019, 6, 096572.	1.6	9
60	Microstructural and Wear Behaviour of Al 6063â€“W Nanocomposites Developed Using Friction Stir Processing. Metals and Materials International, 2021, 27, 5462-5473.	3.4	9
61	Multi-Objective Optimization of EDM Parameters Using Grey Relational Analysis for Titanium Alloy (Tiâ€“6Alâ€“4V). Applied Mechanics and Materials, 0, 592-594, 540-544.	0.2	8
62	Effect of coarse grain matrix content on the mechanical behavior of trimodaled AA 6061-TiO <sub>2</sub> nanocomposite prepared by mechanical alloying. International Journal of Advanced Manufacturing Technology, 2015, 78, 385-394.	3.0	8
63	Heat treatment effect on CNC turning of Incoloy 800H superalloy. Materials and Manufacturing Processes, 2018, 33, 1594-1601.	4.7	8
64	Enhancing the tribological properties of nodular cast iron using multi wall carbon nano-tubes (MWCNTs) as lubricant additives. Materials Research Express, 2019, 6, 045038.	1.6	8
65	Cold deformation of dezincification resistant yellow brass for plumbing applications. Materials and Manufacturing Processes, 2018, 33, 1693-1700.	4.7	7
66	Formation of FeCrMoVC Layers on AA6061 by Laser Cladding Process: Microstructure and Wear Characteristics. Transactions of the Indian Institute of Metals, 2020, 73, 1611-1617.	1.5	6
67	Investigations on the microstructure and mechanical property of friction stir processed AA6061 aluminium sheet metal reinforced with Al<SUB align="right">2O<SUB align="right">3 surface composite. International Journal of Materials Engineering Innovation, 2014, 5, 192.	0.5	5
68	Influence of heat treatment on the mechanical and tribological properties of Incoloy 800H Superalloy. Archives of Civil and Mechanical Engineering, 2021, 21, 1.	3.8	4
69	Continuous hot-compaction behavior of nanostructured FeCrCuMnTi-(V, Zn) high-entropy alloys. Materials and Manufacturing Processes, 2022, 37, 1122-1131.	4.7	4
70	Influence of V and Zn in FeCrCuMnTi High-Entropy Alloys on Microstructures and Uniaxial Compaction Behavior Prepared by Mechanical Alloying. Crystals, 2021, 11, 1413.	2.2	4
71	Enhancement of tensile strength in AA 6061-T6 plates joined by gas tungsten arc welding using high entropy alloy filler sheet. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 832, 142481.	5.6	4
72	Influence of Strain Rate and Percentage of Cold Work on Room-Temperature Deformation Behaviour of AISI 1015 Carbon Steel: Detailed Microstructures and Cold Workability Map Investigations. Transactions of the Indian Institute of Metals, 2020, 73, 1439-1448.	1.5	3

#	ARTICLE	IF	CITATIONS
73	Effects of dry turning parameters of Incoloy 800H superalloy using Taguchi-based Grey relational analysis and modeling by response surface methodology. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 607-623.	2.1	3
74	Synthesis, phase evolutions, microstructures, and compaction behavior of four copper-chalcogenide micron-thermoelectric powders (Cu <sub>2</sub> ZnSnS <sub>4</sub> /Se <sub>4</sub> , Cu <sub>2</sub> MnSiS <sub>4</sub> /Se <sub>4</sub> , Cu <sub>2</sub> MnSnS <sub>4</sub> /Se <sub>4</sub> , and Cu <sub>2</sub> ZnSiS <sub>4</sub> /Se <sub>4</sub> ) prepared by mechanical alloying. Materials Chemistry and Physics, 2021, 271, 124943.	4.0	3
75	Optimization on dry sliding wear behavior of yellow brass using face centered composite design. AIMS Materials Science, 2019, 6, 80-96.	1.4	3
76	Influence of TiC addition on the surface roughness during turning of AA 7075 alloy processed through stir-casting. AIMS Materials Science, 2018, 5, 699-710.	1.4	3
77	A novel study on mechanically alloyed nanocrystalline Ti-6Al-4V alloy fabricated by spark plasma sintering. Powder Metallurgy, 2021, 64, 149-164.	1.7	3
78	Effect of Graphite Addition on Surface Roughness during Turning of AA 7075-ZrB <sub>2</sub> In-situ Metal Matrix Composites. , 2014, 5, 2122-2131.		2
79	OPTIMIZATION AND ANALYSIS OF DRY SLIDING WEAR BEHAVIOR OF STIR CASTED AlSi <sub>6</sub> Cu <sub>4</sub> â€“TiO <sub>2</sub> COMPOSITE USING CENTRAL COMPOSITE DESIGN. Surface Review and Letters, 2019, 26, 1950052.	1.1	2
80	Effect of Al <sub>2</sub> O <sub>3</sub> /Y <sub>2</sub> O <sub>3</sub> in AA 7017 matrix nanocomposites on phase formation, microstructures and mechanical behavior synthesized by mechanical alloying and hot-pressing techniques. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	2.3	2
81	Microstructural Evolutions, Hot Deformation and Work Hardening Behaviour of Novel Alâ€“Zn Binary Alloys Processed by Squeezing and Hot Extrusion. Metals and Materials International, 0, , 1.	3.4	1
82	Synthesizing and Hot Deformation Behavior of Novel Al-X Wt.% Zn Alloys for Advanced Casting Industries. International Journal of Recent Technology and Engineering, 2020, 8, 3981-3986.	0.2	1
83	The influence of ball milling processing variables on the microstructure and compaction behavior of Feâ€“Mnâ€“Cu alloys. Materials Science-Poland, 2021, 39, 410-429.	1.0	1