B. Ratna Sunil

List of Publications by Year
in descending order

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71 papers	1,562 citations	361045 20 h-index	329751 37 g-index
73 all docs	73 docs citations	73 times ranked	1240 citing authors

#	Article	IF	Citations
1	Magnesium based surface metal matrix composites by friction stir processing. Journal of Magnesium and Alloys, 2016, 4, 52-61.	5.5	130
2	Friction stir processing of magnesiumâ€“nanohydroxyapatite composites with controlled in vitro degradation behavior. Materials Science and Engineering C, 2014, 39, 315-324.	3.8	109
3	In vitro and in vivo studies of biodegradable fine grained AZ31 magnesium alloy produced by equal channel angular pressing. Materials Science and Engineering C, 2016, 59, 356-367.	3.8	97
4	Processing and mechanical behavior of lamellar structured degradable magnesiumâ€“hydroxyapatite implants. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 40, 178-189.	1.5	91
5	Nano-hydroxyapatite reinforced AZ31 magnesium alloy by friction stir processing: a solid state processing for biodegradable metal matrix composites. Journal of Materials Science: Materials in Medicine, 2014, 25, 975-988.	1.7	85
6	Producing hydroxyapatite from fish bones by heat treatment. Materials Letters, 2016, 185, 411-414.	1.3	83
7	Influence of bimodal grain size distribution on the corrosion behavior of friction stir processed biodegradable AZ31 magnesium alloy. Journal of Magnesium and Alloys, 2016, 4, 68-76.	5.5	80
8	Role of biomineralization on the degradation of fine grained AZ31 magnesium alloy processed by groove pressing. Materials Science and Engineering C, 2013, 33, 1607-1615.	3.8	76
9	Effect of aluminum content on machining characteristics of AZ31 and AZ91 magnesium alloys during drilling. Journal of Magnesium and Alloys, 2016, 4, 15-21.	5.5	68
10	Joining of AZ31 and AZ91 Mg alloys by friction stir welding. Journal of Magnesium and Alloys, 2015, 3, 330-334.	5.5	53
11	An investigation on the hardness and corrosion behavior of MWCNT/Mg composites and grain refined Mg. Journal of Magnesium and Alloys, 2018, 6, 83-89.	5.5	48
12	Microwave sintering of nanocrystalline WCâ€“12Co: Challenges and perspectives. International Journal of Refractory Metals and Hard Materials, 2010, 28, 180-186.	1.7	42
13	Machining characteristics of fine grained AZ91 Mg alloy processed by friction stir processing. Transactions of Nonferrous Metals Society of China, 2017, 27, 804-811.	1.7	42
14	Joining of AZ91 Mg alloy and Al6063 alloy sheets by friction stir welding. Journal of Magnesium and Alloys, 2018, 6, 71-76.	5.5	42
15	Repetitive Corrugation and Straightening of Sheet Metals. Materials and Manufacturing Processes, 2015, 30, 1262-1271.	2.7	35
16	Machining Characteristics and Corrosion Behavior of Grain Refined AZ91ÂMg Alloy Produced by Friction Stir Processing: Role of Tool Pin Profile. Transactions of the Indian Institute of Metals, 2018, 71, 951-959.	0.7	30
17	Bioactive Grain Refined Magnesium by Friction Stir Processing. Materials Science Forum, 0, 710, 264-269.	0.3	28
18	Field Application of ZnO and TiO2 Nanoparticles on Agricultural Plants. Agronomy, 2021, 11, 2281.	1.3	26

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19	Effect of Grain Refinement on Corrosion Rate, Mechanical and Machining Behavior of Friction Stir Processed ZE41 Mg Alloy. Transactions of the Indian Institute of Metals, 2019, 72, 123-132.	0.7	24
20	Electrospun Nanofibrous Polymer Coated Magnesium Alloy for Biodegradable Implant Applications. , 2014, 5, 817-823.		23
21	Microstructure, hardness and wear behavior of AZ31 Mg alloy â€“ fly ash composites produced by friction stir processing. Materials Today: Proceedings, 2017, 4, 6671-6677.	0.9	23
22	Hardness and sliding wear characteristics of AA7075-T6 surface composites reinforced with B₄C and MoS₂ particles. Materials Research Express, 2019, 6, 086589.	0.8	23
23	Magnesium/fish bone derived hydroxyapatite composites by friction stir processing: studies on mechanical behaviour and corrosion resistance. Bulletin of Materials Science, 2019, 42, 1.	0.8	22
24	Machining characteristics, wear and corrosion behavior of AZ91 magnesium alloy â€•fly ash composites produced by friction stir processing. Materialwissenschaft Und Werkstofftechnik, 2021, 52, 88-99.	0.5	20
25	Nano and ultra fine grained metallic biomaterials by severe plastic deformation techniques. Materials Technology, 2016, 31, 743-755.	1.5	19
26	Sliding wear behavior of AZ91/B₄C surface composites produced by friction stir processing. Materials Research Express, 2020, 7, 016586.	0.8	15
27	Role of microstructure and secondary phase on corrosion behavior of heat treated AZ series magnesium alloys. Materials Today: Proceedings, 2019, 18, 175-181.	0.9	14
28	Wettability and In Vitro Bioactivity Studies on Titanium Rods Processed by Equal Channel Angular Pressing. Transactions of the Indian Institute of Metals, 2013, 66, 299-304.	0.7	13
29	Developing composites of ZE41 Mg alloy - naturally derived hydroxyapatite by friction stir processing: investigatingin vitrodegradation behavior. Materials Technology, 2018, 33, 603-611.	1.5	13
30	Microstructure, mechanical and corrosion properties of friction stir processed ZE41 Mg alloy. Materials Today: Proceedings, 2019, 15, 50-56.	0.9	12
31	Corrosion behavior of friction stir welded AZ31B Mg alloy - Al6063 alloy joint. Cogent Engineering, 2016, 3, 1145565.	1.1	11
32	Producing Al5083-CNT composites by friction stir processing: influence of grain refinement and CNT on mechanical and corrosion properties. Materials Today: Proceedings, 2019, 15, 44-49.	0.9	11
33	Synthesis, characterization, and antimicrobial properties of strontium-substituted hydroxyapatite. Journal of the Australian Ceramic Society, 2021, 57, 195-204.	1.1	11
34	Surface metal matrix composites of Al5083 - fly ash produced by friction stir processing. Materials Today: Proceedings, 2018, 5, 8391-8397.	0.9	10
35	Design and simulation of polymethyl methacrylate-titanium composite bone fixing plates using finite element analysis: Optimizing the composition to minimize the stress shielding effect. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2017, 231, 4402-4412.	1.1	8
36	Effect of heat treatment on the hardness and wear characteristics of NiCrBSi laser clad deposited on AISI410 stainless steel. Materials Research Express, 2019, 6, 086524.	0.8	8

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37	Developing Mg-Zn surface alloy by friction surface allosying: In vitro degradation studies in simulated body fluids. International Journal of Minerals, Metallurgy and Materials, 2020, 27, 962-969.	2.4	8
38	Developing composite of ZE41 magnesium alloy- calcium by friction stir processing for biodegradable implant applications. Materials Today: Proceedings, 2019, 18, 270-277.	0.9	7
39	Surface Engineering of ZE 41 Mg Alloy by Friction Stir Processing: Effect of Process Parameters on Microstructure and Hardness Evolution. Materials Today: Proceedings, 2019, 18, 125-131.	0.9	7
40	Effect of heat treatment on the temperature dependent wear characteristics of electroless Niâ€“Pâ€“BN(h) composite coatings. SN Applied Sciences, 2020, 2, 1.	1.5	7
41	Developing Surface Metal Matrix Composites: A Comparative Survey. Environmental Humanities, 2015, 4, 9-16.	0.4	7
42	Effect of heat treatment environment on the structural characteristics and microhardness of high velocity oxyâ€fuel sprayed tungsten carbideâ€cobalt coatings. Materialwissenschaft Und Werkstofftechnik, 2021, 52, 1346-1354.	0.5	7
43	Joining of AZ31 Mg alloy sheets by friction stir welding and investigating corrosion initiated failure. Materials Today: Proceedings, 2017, 4, 6712-6717.	0.9	6
44	Aspergillus niger Decreases Bioavailability of Arsenic(V) via Biotransformation of Manganese Oxide into Biogenic Oxalate Minerals. Journal of Fungi (Basel, Switzerland), 2020, 6, 270.	1.5	6
45	Effect of cryogenic treatment duration on the microhardness and tribological behavior of 40CrMoV5 tool steel. Materials Today: Proceedings, 2021, 38, 2140-2144.	0.9	6
46	Sliding wear characteristics of as-deposited and heat-treated electroless Ni-P coatings against AISI E52100 steel ball. Materials Research Express, 2019, 6, 036401.	0.8	5
47	Magnesium-Based Composites for Degradable Implant Applications. , 2021, , 770-780.		5
48	Zinc-Substituted Hydroxyapatite: Synthesis, Structural Analysis, and Antimicrobial Behavior. Transactions of the Indian Institute of Metals, 2021, 74, 2335-2344.	0.7	4
49	Investigation on the role of microstructure and temperature on tribological characteristics of fine-grained ZE41 Mg alloy. Tribology - Materials, Surfaces and Interfaces, 2022, 16, 68-75.	0.6	4
50	Developing Zn-MgO composites for degradable implant applications by powder metallurgy route. Materials Letters, 2021, 302, 130433.	1.3	4
51	Fracture toughness and fatigue behavior of spider silk and S-glass epoxy composites: An FEM approach. Materials Today: Proceedings, 2018, 5, 2627-2634.	0.9	3
52	Effects of inert gas environment on the sliding wear behavior of AZ91/B₄C surface composites. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2022, 236, 1880-1888.	1.0	3
53	Developing composites of zinc and hydroxyapatite for degradable orthopedic implant applications. IOP Conference Series: Materials Science and Engineering, 2021, 1116, 012002.	0.3	3
54	Effect of Crack Angle on Stress Shielding in Bone and Orthopedic Fixing Plate Implant: Design and Simulation. Lecture Notes in Mechanical Engineering, 2021, , 785-792.	0.3	3

#	Article	IF	Citations
55	Investigation on theÂStructural and Wear Characteristics of Mg AZ91/Fly Ash Surface Composites Fabricated by Friction Stir Processing. Lecture Notes on Multidisciplinary Industrial Engineering, 2019, , 703-710.	0.4	3
56	Enhancing the wettability of pure titanium by shot peening for implant applications. IOP Conference Series: Materials Science and Engineering, 2021, 1185, 012012.	0.3	3
57	Machining behaviour of AZ91E hybrid composite reinforced with granite and fly ash powders. Engineering Research Express, 2022, 4, 015035.	0.8	3
58	Effect of Processing Route and Working Temperature on Microstructure Evolution of AZ31 Magnesium Alloy During Equal Channel Angular Pressing. , 2014, 5, 841-846.		2
59	Reciprocating sliding wear behavior of the heat-treated WC-12Co coatings. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2023, 237, 798-807.	1.0	2
60	Zinc-calcium silicate composites produced by ball milling and sintering for degradable implant applications. Materials Today: Proceedings, 2021, 44, 1584-1588.	0.9	1
61	Role of plunge depth on the joint formation and mechanical behavior of Al6063â€AZ91 dissimilar lap joint produced by friction stir welding. Materialwissenschaft Und Werkstofftechnik, 2021, 52, 111-121.	0.5	1
62	Friction and wear behaviour of BN(h) and Ag incorporated nickel phosphorous coatings under dry reciprocating sliding conditions. Tribology - Materials, Surfaces and Interfaces, 2022, 16, 23-33.	0.6	1
63	Effect of Friction Stir Processing on the Sliding Wear Characteristics of AZ91 Mg Alloy. Lecture Notes in Mechanical Engineering, 2021, , 663-669.	0.3	1
64	Role of heat treatment on machining characteristics and surface roughness of AZ91 Mg alloy. Materials Today: Proceedings, 2021, 50, 2488-2488.	0.9	1
65	Numerical evaluation of the residual stresses in shot peening of alloy steels. Engineering Research Express, 2021, 3, 045059.	0.8	1
66	Role of microstructure on the degradation behaviour of friction stir processed AZ series Mg alloys assessed in simulated physiological solutions. IOP Conference Series: Materials Science and Engineering, 2019, 653, 012025.	0.3	0
67	Effect of heat treatment on mechanical and tribological characteristics of Electroless Ni-P deposits. Journal of Physics: Conference Series, 2019, 1355, 012032.	0.3	0
68	Tuning the Morphology and State of Aggregation of Fullerene C60 using Non-ionic Surfactants. Colloid Journal, 2021, 83, 474-482.	0.5	0
69	Bioactive titanium composites for bone implant applications. IOP Conference Series: Materials Science and Engineering, 2021, 1185, 012032.	0.3	0
70	Effect of Processing Factors on the Composite Formation by FSP. , 2019, , 159-196.		0
71	Influencing Factors. , 2019, , 69-82.		0