

# B. Ratna Sunil

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2325328/publications.pdf>

Version: 2024-02-01

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	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
2	Effects of inert gas environment on the sliding wear behavior of AZ91/B <sub>4</sub> C surface composites. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2022, 236, 1880-1888.	1.0	3
3	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
4	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
5	Machining behaviour of AZ91E hybrid composite reinforced with granite and fly ash powders. Engineering Research Express, 2022, 4, 015035.	0.8	3
6	Magnesium-Based Composites for Degradable Implant Applications. , 2021, , 770-780.		5
7	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
8	Synthesis, characterization, and antimicrobial properties of strontium-substituted hydroxyapatite. Journal of the Australian Ceramic Society, 2021, 57, 195-204.	1.1	11
9	Zinc-calcium silicate composites produced by ball milling and sintering for degradable implant applications. Materials Today: Proceedings, 2021, 44, 1584-1588.	0.9	1
10	Role of plunge depth on the joint formation and mechanical behavior of Al6063/AZ91 dissimilar lap joint produced by friction stir welding. Materialwissenschaft Und Werkstofftechnik, 2021, 52, 111-121.	0.5	1
11	Machining characteristics, wear and corrosion behavior of AZ91 magnesium alloy fly ash composites produced by friction stir processing. Materialwissenschaft Und Werkstofftechnik, 2021, 52, 88-99.	0.5	20
12	Developing composites of zinc and hydroxyapatite for degradable orthopedic implant applications. IOP Conference Series: Materials Science and Engineering, 2021, 1116, 012002.	0.3	3
13	Zinc-Substituted Hydroxyapatite: Synthesis, Structural Analysis, and Antimicrobial Behavior. Transactions of the Indian Institute of Metals, 2021, 74, 2335-2344.	0.7	4
14	Tuning the Morphology and State of Aggregation of Fullerene C60 using Non-ionic Surfactants. Colloid Journal, 2021, 83, 474-482.	0.5	0
15	Developing Zn-MgO composites for degradable implant applications by powder metallurgy route. Materials Letters, 2021, 302, 130433.	1.3	4
16	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
17	Bioactive titanium composites for bone implant applications. IOP Conference Series: Materials Science and Engineering, 2021, 1185, 012032.	0.3	0
18	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

#	ARTICLE	IF	CITATIONS
19	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
20	Field Application of ZnO and TiO <sub>2</sub> Nanoparticles on Agricultural Plants. Agronomy, 2021, 11, 2281.	1.3	26
21	Role of heat treatment on machining characteristics and surface roughness of AZ91 Mg alloy. Materials Today: Proceedings, 2021, 50, 2488-2488.	0.9	1
22	Effect of heat treatment environment on the structural characteristics and microhardness of high velocity oxy-fuel sprayed tungsten carbide-cobalt coatings. Materialwissenschaft Und Werkstofftechnik, 2021, 52, 1346-1354.	0.5	7
23	Numerical evaluation of the residual stresses in shot peening of alloy steels. Engineering Research Express, 2021, 3, 045059.	0.8	1
24	Developing Mg-Zn surface alloy by friction surface alloying: In vitro degradation studies in simulated body fluids. International Journal of Minerals, Metallurgy and Materials, 2020, 27, 962-969.	2.4	8
25	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
26	Effect of heat treatment on the temperature dependent wear characteristics of electroless Ni-P-BN(h) composite coatings. SN Applied Sciences, 2020, 2, 1.	1.5	7
27	Sliding wear behavior of AZ91/B <sub>4</sub> C surface composites produced by friction stir processing. Materials Research Express, 2020, 7, 016586.	0.8	15
28	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
29	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
30	Microstructure, mechanical and corrosion properties of friction stir processed ZE41 Mg alloy. Materials Today: Proceedings, 2019, 15, 50-56.	0.9	12
31	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
32	Hardness and sliding wear characteristics of AA7075-T6 surface composites reinforced with B <sub>4</sub> C and MoS <sub>2</sub> particles. Materials Research Express, 2019, 6, 086589.	0.8	23
33	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
34	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
35	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
36	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

#	ARTICLE	IF	CITATIONS
37	Role of microstructure and secondary phase on corrosion behavior of heat treated AZ series magnesium alloys. <i>Materials Today: Proceedings</i> , 2019, 18, 175-181.	0.9	14
38	Effect of Grain Refinement on Corrosion Rate, Mechanical and Machining Behavior of Friction Stir Processed ZE41 Mg Alloy. <i>Transactions of the Indian Institute of Metals</i> , 2019, 72, 123-132.	0.7	24
39	Sliding wear characteristics of as-deposited and heat-treated electroless Ni-P coatings against AISI E52100 steel ball. <i>Materials Research Express</i> , 2019, 6, 036401.	0.8	5
40	Investigation on the Structural and Wear Characteristics of Mg AZ91/Fly Ash Surface Composites Fabricated by Friction Stir Processing. <i>Lecture Notes on Multidisciplinary Industrial Engineering</i> , 2019, , 703-710.	0.4	3
41	Effect of Processing Factors on the Composite Formation by FSP. , 2019, , 159-196.		0
42	Influencing Factors. , 2019, , 69-82.		0
43	Joining of AZ91 Mg alloy and Al6063 alloy sheets by friction stir welding. <i>Journal of Magnesium and Alloys</i> , 2018, 6, 71-76.	5.5	42
44	Fracture toughness and fatigue behavior of spider silk and S-glass epoxy composites: An FEM approach. <i>Materials Today: Proceedings</i> , 2018, 5, 2627-2634.	0.9	3
45	Surface metal matrix composites of Al5083 - fly ash produced by friction stir processing. <i>Materials Today: Proceedings</i> , 2018, 5, 8391-8397.	0.9	10
46	Machining Characteristics and Corrosion Behavior of Grain Refined AZ91 Mg Alloy Produced by Friction Stir Processing: Role of Tool Pin Profile. <i>Transactions of the Indian Institute of Metals</i> , 2018, 71, 951-959.	0.7	30
47	An investigation on the hardness and corrosion behavior of MWCNT/Mg composites and grain refined Mg. <i>Journal of Magnesium and Alloys</i> , 2018, 6, 83-89.	5.5	48
48	Developing composites of ZE41 Mg alloy - naturally derived hydroxyapatite by friction stir processing: investigating <i>in vitro</i> degradation behavior. <i>Materials Technology</i> , 2018, 33, 603-611.	1.5	13
49	Machining characteristics of fine grained AZ91 Mg alloy processed by friction stir processing. <i>Transactions of Nonferrous Metals Society of China</i> , 2017, 27, 804-811.	1.7	42
50	Design and simulation of polymethyl methacrylate-titanium composite bone fixing plates using finite element analysis: Optimizing the composition to minimize the stress shielding effect. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2017, 231, 4402-4412.	1.1	8
51	Microstructure, hardness and wear behavior of AZ31 Mg alloy " fly ash composites produced by friction stir processing. <i>Materials Today: Proceedings</i> , 2017, 4, 6671-6677.	0.9	23
52	Joining of AZ31 Mg alloy sheets by friction stir welding and investigating corrosion initiated failure. <i>Materials Today: Proceedings</i> , 2017, 4, 6712-6717.	0.9	6
53	Nano and ultra fine grained metallic biomaterials by severe plastic deformation techniques. <i>Materials Technology</i> , 2016, 31, 743-755.	1.5	19
54	Influence of bimodal grain size distribution on the corrosion behavior of friction stir processed biodegradable AZ31 magnesium alloy. <i>Journal of Magnesium and Alloys</i> , 2016, 4, 68-76.	5.5	80

#	ARTICLE	IF	CITATIONS
55	Magnesium based surface metal matrix composites by friction stir processing. Journal of Magnesium and Alloys, 2016, 4, 52-61.	5.5	130
56	Corrosion behavior of friction stir welded AZ31B Mg alloy - Al6063 alloy joint. Cogent Engineering, 2016, 3, 1145565.	1.1	11
57	Producing hydroxyapatite from fish bones by heat treatment. Materials Letters, 2016, 185, 411-414.	1.3	83
58	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
59	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
60	Joining of AZ31 and AZ91 Mg alloys by friction stir welding. Journal of Magnesium and Alloys, 2015, 3, 330-334.	5.5	53
61	Repetitive Corrugation and Straightening of Sheet Metals. Materials and Manufacturing Processes, 2015, 30, 1262-1271.	2.7	35
62	Developing Surface Metal Matrix Composites: A Comparative Survey. Environmental Humanities, 2015, 4, 9-16.	0.4	7
63	Effect of Processing Route and Working Temperature on Microstructure Evolution of AZ31 Magnesium Alloy During Equal Channel Angular Pressing. , 2014, 5, 841-846.		2
64	Electrospun Nanofibrous Polymer Coated Magnesium Alloy for Biodegradable Implant Applications. , 2014, 5, 817-823.		23
65	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
66	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
67	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
68	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
69	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
70	Microwave sintering of nanocrystalline WCâ€“12Co: Challenges and perspectives. International Journal of Refractory Metals and Hard Materials, 2010, 28, 180-186.	1.7	42
71	Bioactive Grain Refined Magnesium by Friction Stir Processing. Materials Science Forum, 0, 710, 264-269.	0.3	28