

# Mitun Das

## List of Publications by Year in descending order

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70  
papers

2,730  
citations

159585

30  
h-index

189892

50  
g-index

71  
all docs

71  
docs citations

71  
times ranked

2453  
citing authors

#	ARTICLE	IF	CITATIONS
1	In vitro and in vivo degradation assessment and preventive measures of biodegradable Mg alloys for biomedical applications. <i>Journal of Biomedical Materials Research - Part A</i> , 2022, 110, 462-487.	4.0	29
2	Biocompatibility and corrosion evaluation of niobium oxide coated AZ31B alloy for biodegradable implants. <i>Colloids and Surfaces B: Biointerfaces</i> , 2022, 212, 112342.	5.0	9
3	Laser-based directed energy deposition (DED-LB) of advanced materials. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 840, 142967.	5.6	82
4	In vitro biocompatibility and degradation assessment of tantalum oxide coated Mg alloy as biodegradable implants. <i>Journal of Alloys and Compounds</i> , 2022, 905, 164272.	5.5	15
5	Tribocorrosion characteristics of Ti6Al4V-TiB-TiN in-situ composite coatings prepared using plasma spraying. <i>Journal of Composite Materials</i> , 2021, 55, 1935-1946.	2.4	1
6	Microstructure, mechanical, in vitro corrosion and biocompatibility response study of as-cast and as-rolled Mg <sub>5</sub> Zn <sub>0.5</sub> Zr alloy. <i>MRS Advances</i> , 2021, 6, 472-476.	0.9	1
7	Hydrogel-integrated 3D-printed poly(lactic acid) scaffolds for bone tissue engineering. <i>Journal of Materials Research</i> , 2021, 36, 3833-3842.	2.6	5
8	Microstructure and properties of parts manufactured by directed energy deposition of water-atomized low-alloy steel powders. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 814, 141232.	5.6	2
9	Biological performance of metal metalloid (TiCuZrPd:B) TFMG fabricated by pulsed laser deposition. <i>Colloids and Surfaces B: Biointerfaces</i> , 2021, 202, 111684.	5.0	4
10	Directed energy deposition (DED) additive manufacturing: Physical characteristics, defects, challenges and applications. <i>Materials Today</i> , 2021, 49, 271-295.	14.2	351
11	Site-specific microstructure, porosity and mechanical properties of LENS <sub>2</sub> processed Ti <sub>6</sub> Al <sub>4</sub> V alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 820, 141494.	5.6	5
12	Synthesis, characterization and in vitro biocompatibility study of strontium titanate ceramic: A potential biomaterial. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 102, 103494.	3.1	15
13	Biointegration of three-dimensional <sup>3</sup> -printed biomaterials and biomedical devices. , 2020, , 433-482.		3
14	Effect of heat treatment on microstructure, mechanical, corrosion and biocompatibility of Mg-Zn-Zr-Gd-Nd alloy. <i>Journal of Alloys and Compounds</i> , 2020, 821, 153462.	5.5	55
15	Bio-tribological response of duplex surface engineered SS316L for hip-implant application. <i>Applied Surface Science</i> , 2020, 507, 145009.	6.1	12
16	New Mg-Ca-Zn amorphous alloys: Biocompatibility, wettability and mechanical properties. <i>Materialia</i> , 2020, 12, 100799.	2.7	26
17	Degradation, wettability and surface characteristics of laser surface modified Mg <sub>5</sub> Zn <sub>0.5</sub> Gd <sub>0.5</sub> Nd alloy. <i>Journal of Materials Science: Materials in Medicine</i> , 2020, 31, 42.	3.6	2
18	Synthesis of new glassy Mg-Ca-Zn alloys with exceptionally low Young's Modulus: Exploring near eutectic compositions. <i>Scripta Materialia</i> , 2019, 173, 139-143.	5.2	7

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19	Microstructure & Property correlations for additively manufactured NiTi based shape memory alloys. <i>Materialia</i> , 2019, 8, 100456.	2.7	50
20	Surface engineering of LENS-Ti-6Al-4V to obtain nano- and micro-surface topography for orthopedic application. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2019, 18, 157-168.	3.3	5
21	Spark plasma sintering of Ti-diamond composites. <i>Ceramics International</i> , 2019, 45, 11281-11286.	4.8	6
22	Effect of fluorine substitution on sintering behaviour, mechanical and bioactivity of hydroxyapatite. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 95, 136-142.	3.1	33
23	Laser surface melting of Mg-Zn-Dy alloy for better wettability and corrosion resistance for biodegradable implant applications. <i>Applied Surface Science</i> , 2019, 480, 70-82.	6.1	57
24	Strontium doped hydroxyapatite from <i>Mercenaria</i> clam shells: Synthesis, mechanical and bioactivity study. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 90, 328-336.	3.1	43
25	Mechanical, wear, corrosion and biological properties of arc deposited titanium nitride coatings. <i>Surface and Coatings Technology</i> , 2018, 344, 214-222.	4.8	91
26	Effect of heat treatment on microstructure, corrosion, and shape memory characteristics of laser deposited NiTi alloy. <i>Journal of Alloys and Compounds</i> , 2018, 744, 337-346.	5.5	75
27	Laser processing of Ti composite coatings reinforced with hydroxyapatite and bioglass. <i>Additive Manufacturing</i> , 2018, 20, 134-143.	3.0	9
28	Wear and corrosion properties of in-situ grown zirconium nitride layers for implant applications. <i>Surface and Coatings Technology</i> , 2018, 334, 357-364.	4.8	29
29	Laser surface modification of 316L stainless steel. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2018, 106, 569-577.	3.4	35
30	In vitro tribological and biocompatibility evaluation of sintered silicon nitride. <i>Materials Letters</i> , 2018, 212, 130-133.	2.6	19
31	Nano- and micro-tribological behaviours of plasma nitrided Ti6Al4V alloys. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 77, 267-294.	3.1	40
32	Fluorine substituted nano hydroxyapatite: Synthesis, bio-activity and antibacterial response study. <i>Ceramics International</i> , 2018, 44, 22008-22013.	4.8	28
33	Effect of zinc and rare-earth element addition on mechanical, corrosion, and biological properties of magnesium. <i>Journal of Materials Research</i> , 2018, 33, 3466-3478.	2.6	16
34	Laser surface modification of Mg-Zn-Gd alloy: microstructural, wettability and in vitro degradation aspects. <i>Materials Research Express</i> , 2018, 5, 126502.	1.6	4
35	Surface design of Mg-Zn alloy temporary orthopaedic implants: Tailoring wettability and biodegradability using laser surface melting. <i>Surface and Coatings Technology</i> , 2018, 347, 337-349.	4.8	43
36	Phase pure, high hardness, biocompatible calcium silicates with excellent anti-bacterial and biofilm inhibition efficacies for endodontic and orthopaedic applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 86, 264-283.	3.1	20

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37	Thermally oxidized electron beam melted $\hat{\text{T}}^3\text{-TiAl}$ : In vitro wear, corrosion, and biocompatibility properties. <i>Journal of Materials Research</i> , 2018, 33, 2096-2105.	2.6	10
38	Synthesis, characterization, and bioactivity of $\text{SrTiO}_3$ -incorporated titanium coating. <i>Journal of Materials Research</i> , 2018, 33, 2087-2095.	2.6	10
39	Articulating Biomaterials. , 2018, , 859-910.		0
40	Synthesis of hydroxyapatite from Lates calcarifer fish bone for biomedical applications. <i>Materials Letters</i> , 2017, 203, 89-92.	2.6	95
41	Two-Step Electrochemical Pretreatment and Electrodeposition of Silver on Stainless Steel. <i>Journal of the Electrochemical Society</i> , 2017, 164, D463-D468.	2.9	3
42	Mechanochemical synthesis of nanocrystalline hydroxyapatite from <i>Mercenaria</i> clam shells and phosphoric acid. <i>Biomedical Physics and Engineering Express</i> , 2017, 3, 015010.	1.2	44
43	Plasma-Sprayed Ti6Al4V Alloy Composite Coatings Reinforced with In Situ Formed TiB-TiN. <i>Journal of Thermal Spray Technology</i> , 2017, 26, 2013-2019.	3.1	15
44	Effect of trace elements on the sintering effect of fish scale derived hydroxyapatite and its bioactivity. <i>Ceramics International</i> , 2017, 43, 15678-15684.	4.8	72
45	In vitro wear, corrosion and biocompatibility of electron beam melted $\hat{\text{T}}^3\text{-TiAl}$ . <i>Materials and Design</i> , 2017, 133, 186-194.	7.0	18
46	Nanotribological response of a plasma nitrided bio-steel. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 65, 584-599.	3.1	23
47	Laser melting of titanium-diamond composites: Microstructure and mechanical behavior study. <i>Materials Letters</i> , 2016, 178, 284-287.	2.6	18
48	Current advances in enhancement of wear and corrosion resistance of titanium alloys – a review. <i>Materials Technology</i> , 2016, 31, 696-704.	3.0	42
49	Tribo-mechanical characterization of spark plasma sintered chopped carbon fibre reinforced silicon carbide composites. <i>Ceramics International</i> , 2016, 42, 18283-18288.	4.8	15
50	Severe wear behaviour of alumina balls sliding against diamond ceramic coatings. <i>Bulletin of Materials Science</i> , 2016, 39, 573-586.	1.7	10
51	Additive Manufacturing of $\hat{\text{T}}^3\text{-TiAl}$ : Processing, Microstructure, and Properties. <i>Advanced Engineering Materials</i> , 2016, 18, 1208-1215.	3.5	58
52	Understanding compressive deformation behavior of porous Ti using finite element analysis. <i>Materials Science and Engineering C</i> , 2016, 64, 436-443.	7.3	32
53	Tribological, electrochemical and in vitro biocompatibility properties of SiC reinforced composite coatings. <i>Materials and Design</i> , 2016, 95, 510-517.	7.0	32
54	Additive Manufacturing of Co-Cr-Mo Alloy: Influence of Heat Treatment on Microstructure, Tribological, and Electrochemical Properties. <i>Frontiers in Mechanical Engineering</i> , 2015, 1, .	1.8	60

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55	Microstructure and corrosion behavior of laser processed NiTi alloy. <i>Materials Science and Engineering C</i> , 2015, 57, 309-313.	7.3	89
56	Articulating Biomaterials. <i>Advances in Chemical and Materials Engineering Book Series</i> , 2015, , 218-267.	0.3	2
57	Laser-deposited CoCrMo alloy: Microstructure, wear, and electrochemical properties. <i>Journal of Materials Research</i> , 2014, 29, 2021-2027.	2.6	39
58	In situ synthesized TiBâ€“TiN reinforced Ti6Al4V alloy composite coatings: Microstructure, tribological and in-vitro biocompatibility. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 29, 259-271.	3.1	111
59	Effect of hydroxyapatite particle size, morphology and crystallinity on proliferation of colon cancer HCT116 cells. <i>Materials Science and Engineering C</i> , 2014, 39, 336-339.	7.3	83
60	Laser surface modification of 316L stainless steel with bioactive hydroxyapatite. <i>Materials Science and Engineering C</i> , 2013, 33, 4594-4598.	7.3	52
61	Fabrication of Biomedical Implants using Laser Engineered Net Shaping (LENSâ„¢). <i>Transactions of the Indian Ceramic Society</i> , 2013, 72, 169-174.	1.0	46
62	Synthesis of boron nitride from boron containing poly(vinyl alcohol) as ceramic precursor. <i>Bulletin of Materials Science</i> , 2012, 35, 99-102.	1.7	16
63	Laser processing of in situ synthesized TiBâ€“TiN-reinforced Ti6Al4V alloy coatings. <i>Scripta Materialia</i> , 2012, 66, 578-581.	5.2	99
64	Investigation on the effect of spark gap in dry $\mu$ -electro discharge machining of SiC-10BN nano-composite. <i>International Journal of Manufacturing Technology and Management</i> , 2011, 24, 71.	0.1	1
65	Microstructure, mechanical and wear properties of laser processed SiC particle reinforced coatings on titanium. <i>Surface and Coatings Technology</i> , 2011, 205, 4366-4373.	4.8	57
66	An investigation on electro discharge micro-drilling of SiC-20% BN composite. <i>International Journal of Materials and Structural Integrity</i> , 2011, 5, 348.	0.1	2
67	Effect of activation on boron nitride coating on carbon fiber. <i>Ceramics International</i> , 2010, 36, 2511-2514.	4.8	22
68	Laser processing of SiC-particle-reinforced coating on titanium. <i>Scripta Materialia</i> , 2010, 63, 438-441.	5.2	191
69	Carbothermal synthesis of boron nitride coating on PAN carbon fiber. <i>Journal of the European Ceramic Society</i> , 2009, 29, 2129-2134.	5.7	82
70	Microstructural characterization of amorphous and nanocrystalline boron nitride prepared by high-energy ball milling. <i>Materials Research Bulletin</i> , 2008, 43, 1023-1031.	5.2	54