Debrupa Lahiri

List of Publications by Year in Descending Order

119 papers	5,438 citations	38 h-index	72 g-index
123 ext. papers	6,211 ext. citations	5.4 avg, IF	6.04 L-index

#	Paper	IF	Citations
119	Physico-chemical Modifications of Magnesium and Alloys for Biomedical Applications **2022**, 131-180		
118	Extracts Prevent Hyperglycemia in Type 2 Diabetes Mellitus.. *Preventive Nutrition and Food Science*, **2022**, 27, 50-62	2.4	1
117	Multilayered porous hydroxyapatite coating on Ti6Al4V implant with enhanced drug delivery and antimicrobial properties. *Journal of Drug Delivery Science and Technology*, **2022**, 70, 103155	4.5	0
116	Assessment of protein adhesion behaviour and biocompatibility of magnesium/Co-substituted HA-based composites for orthopaedic application.. *International Journal of Biological Macromolecules*, **2022**, 208, 707-719	7.9	1
115	Biocompatibility and biodegradability evaluation of magnesium-based intramedullary bone implants in avian model. *Journal of Biomedical Materials Research - Part A*, **2021**, 109, 1479-1489	5.4	0
114	Nutraceutical regulation of miRNAs involved in neurodegenerative diseases and brain cancers. *Heliyon*, **2021**, 7, e07262	3.6	1
113	Synthesis and evaluation of magnesium/co-precipitated hydroxyapatite based composite for biomedical application. *Journal of the Mechanical Behavior of Biomedical Materials*, **2021**, 118, 104460	4.1	4
112	Electrophoretically deposited graphene oxide with modified substrate–suspension interface for tailored field emission response. *Journal of Applied Electrochemistry*, **2021**, 51, 197-207	2.6	2
111	Analysis of neural cell behaviour on anisotropic electrically conductive polymeric biodegradable scaffolds reinforced with carbon nanotubes. *Medical Devices & Sensors*, **2021**, 4, e10152	1.6	2
110	Effect of multi-axial hot forging process on mechanical, and corrosion resistance behavior of Mg-3Zn alloy for temporary orthopedic implants. *Engineering Reports*, **2021**, 3, e12286	1.2	0
109	Recent Trends in Electrospinning for the Preparation of Ultrathin Plastic and Polymer Fibers for Bio-Medical Applications **2021**,		
108	Decellularized xenogenic cartilage extracellular matrix (ECM) scaffolds for the reconstruction of osteochondral defects in rabbits. *Journal of Materials Chemistry B*, **2021**, 9, 4873-4894	7.3	3
107	Quantifying nanodiamonds assisted exfoliation of graphene and its effect on toughening behaviour of composite structure. *Composites Part A: Applied Science and Manufacturing*, **2020**, 132, 105840	8.4	5
106	Investigation of crystallinity, mechanical properties, fracture toughness and cell proliferation in plasma sprayed graphene nano platelets reinforced hydroxyapatite coating. *Materials Research Express*, **2020**, 7, 015415	1.7	4
105	Functionally gradient magnesium-based composite for temporary orthopaedic implant with improved corrosion resistance and osteogenic properties. *Biomedical Materials (Bristol)*, **2020**, 16, 015017	3.5	9
104	Distinct Levels of Adhesion Energy of Grown CuO Nanostructures. *Journal of Nanoscience and Nanotechnology*, **2020**, 20, 3527-3534	1.3	
103	Evaluating the effect of addition of nanodiamond on the synergistic effect of graphene-carbon nanotube hybrid on the mechanical properties of epoxy based composites. *Polymer Testing*, **2020**, 81, 106274	4.5	21

102	Assessment of biomechanical stability and formulation of a statistical model on magnesium based composite in two different milieus. *Journal of the Mechanical Behavior of Biomedical Materials*, **2020**, 111, 103980	4.1	4
101	The influence of bioactive hydroxyapatite shape and size on the mechanical and biodegradation behaviour of magnesium based composite. *Ceramics International*, **2020**, 46, 27205-27218	5.1	16
100	Anisotropically Conductive Biodegradable Scaffold with Coaxially Aligned Carbon Nanotubes for Directional Regeneration of Peripheral Nerves.. *ACS Applied Bio Materials*, **2020**, 3, 5796-5812	4.1	11
99	Investigating the role of 3D network of carbon nanofillers in improving the mechanical properties of carbon fiber epoxy laminated composite. *Composites Part A: Applied Science and Manufacturing*, **2019**, 126, 105601	8.4	23
98	Bioengineered smart trilayer skin tissue substitute for efficient deep wound healing. *Materials Science and Engineering C*, **2019**, 105, 110140	8.3	22
97	Surface Modified Metallic Orthopedic Implant for Sustained Drug Release and Osteocompatibility.. *ACS Applied Bio Materials*, **2019**, 2, 4181-4192	4.1	10
96	Mg-3Zn/HA Biodegradable Composites Synthesized via Spark Plasma Sintering for Temporary Orthopedic Implants. *Journal of Materials Engineering and Performance*, **2019**, 28, 5702-5715	1.6	12
95	Comparative study on the efficacy of the UHMWPE surface modification by chemical etching and electrostatic spraying method for drug release by orthopedic implants. *Materials Science and Engineering C*, **2019**, 105, 110117	8.3	5
94	Strong and transparent PMMA sheet reinforced with amine functionalized BN nanoflakes for UV-shielding application. *Composites Part B: Engineering*, **2019**, 176, 107274	10	21
93	Development and Characterization of Acellular Caprine Choncal Cartilage Matrix for Tissue Engineering Applications. *Cartilage*, **2019**, 1947603519855769	3	4
92	Surface modification of CNT reinforced UHMWPE composite for sustained drug delivery. *Journal of Drug Delivery Science and Technology*, **2019**, 52, 748-759	4.5	14
91	Spatial distribution of nanodiamond and its effect on mechanical behaviour of epoxy based composite using 2D modulus mapping. *Mechanics of Materials*, **2019**, 135, 114-128	3.3	8
90	Au nanoparticle-decorated aragonite microdumbbells for enhanced antibacterial and anticancer activities. *Materials Science and Engineering C*, **2019**, 103, 109734	8.3	9
89	Protein adsorption and biodegradation behaviour of Mg–Zn/HA for biomedical application. *Nanomaterials and Energy*, **2019**, 8, 23-32	1.1	8
88	Differential in vitro degradation and protein adhesion behaviour of spark plasma sintering fabricated magnesium-based temporary orthopaedic implant in serum and simulated body fluid. *Biomedical Materials (Bristol)*, **2019**, 15, 015006	3.5	7
87	The Evolving Neural Tissue Engineering Landscape of India.. *ACS Applied Bio Materials*, **2019**, 2, 5446-5459	4.1	2
86	In Vitro Biodegradation and Biocompatibility of Mg–HA-Based Composites for Orthopaedic Applications: A Review. *Journal of the Indian Institute of Science*, **2019**, 99, 303-327	2.4	12
85	Differential neural cell adhesion and neurite outgrowth on carbon nanotube and graphene reinforced polymeric scaffolds. *Materials Science and Engineering C*, **2019**, 97, 539-551	8.3	30

84	Mechanical Integrity of Biodegradable Mg HA Composite During In Vitro Exposure. *Journal of Materials Engineering and Performance*, **2019**, 28, 800-809	1.6	22
83	Copper catalyzed growth of hexagonal boron nitride nanotubes on a tungsten substrate. *CrystEngComm*, **2018**, 20, 2713-2719	3.3	5
82	Effect of graphene and CNT reinforcement on mechanical and thermomechanical behavior of epoxy A comparative study. *Journal of Applied Polymer Science*, **2018**, 135, 46101	2.9	33
81	Effect of warm rolling and annealing on the mechanical properties of aluminum composite reinforced with boron nitride nanotubes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 710, 366-373	5.3	19
80	Mechanical, corrosion and biocompatibility behaviour of Mg-3Zn-HA biodegradable composites for orthopaedic fixture accessories. *Journal of the Mechanical Behavior of Biomedical Materials*, **2018**, 78, 442-454	4.1	58
79	Measurement of bonding strength of thermally reduced graphene oxide with soda lime glass using nanoscratch technique. *Materials Today: Proceedings*, **2018**, 5, 16338-16345	1.4	1
78	Synthesis of Boron Nitride Nanotubes and Boron Nitride Nanoflakes with Potential Application in Bioimaging. *Materials Today: Proceedings*, **2018**, 5, 16756-16762	1.4	10
77	Strengthening mechanism in graphene nanoplatelets reinforced aluminum composite fabricated through spark plasma sintering. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 695, 20-28	5.3	148
76	Sustained drug release from surface modified UHMWPE for acetabular cup lining in total hip implant. *Materials Science and Engineering C*, **2017**, 77, 649-661	8.3	13
75	Temperature-time dependent transmittance, sheet resistance and bonding energy of reduced graphene oxide on soda lime glass. *Applied Surface Science*, **2017**, 425, 558-563	6.7	13
74	Thermally reduced graphene oxide film on soda lime glass as transparent conducting electrode. *Surface and Coatings Technology*, **2017**, 309, 931-937	4.4	19
73	Graphene reinforced metal and ceramic matrix composites: a review. *International Materials Reviews*, **2017**, 62, 241-302	16.1	337
72	Dry Sliding Wear Behavior of Hafnium-Based Bulk Metallic Glass at Room and Elevated Temperatures. *Journal of Materials Engineering and Performance*, **2016**, 25, 3931-3937	1.6	7
71	Electric field and current assisted alignment of CNT inside polymer matrix and its effects on electrical and mechanical properties. *Polymer*, **2016**, 89, 119-127	3.9	57
70	Strengthening of Mg based alloy through grain refinement for orthopaedic application. *Journal of the Mechanical Behavior of Biomedical Materials*, **2016**, 59, 57-70	4.1	63
69	Electrophoretic deposition of hydroxyapatite coating on Mg Zn alloy for orthopaedic application. *Surface and Coatings Technology*, **2016**, 287, 82-92	4.4	66
68	Aligned carbon nanotube containing scaffolds for neural tissue regeneration. *Neural Regeneration Research*, **2016**, 11, 1062-3	4.5	14
67	Emergence of fluorescence in boron nitride nanoflakes and its application in bioimaging. *RSC Advances*, **2016**, 6, 48025-48032	3.7	23

66	Biocompatibility of ultrafine grained zircaloy-2 produced by cryorolling for medical applications. *Materials Science and Engineering C*, **2015**, 46, 309-15	8.3	11
65	Quantifying bonding strength of CuO nanotubes with substrate using the nano-scratch technique. *Nanotechnology*, **2015**, 26, 305701	3.4	6
64	Sol–Gel Derived Hydroxyapatite Coating on Mg-3Zn Alloy for Orthopedic Application. *Jom*, **2015**, 67, 702-712	2.1	30
63	Aligned carbon nanotube reinforced polymeric scaffolds with electrical cues for neural tissue regeneration. *Carbon*, **2015**, 95, 715-724	10.4	67
62	Scratch induced deformation behavior of hafnium based bulk metallic glass at multiple load scales. *Journal of Non-Crystalline Solids*, **2015**, 410, 118-126	3.9	16
61	A novel energy-based method to evaluate indentation modulus and hardness of cementitious materials from nanoindentation load–displacement data. *Materials and Structures/Materiaux Et Constructions*, **2015**, 48, 2915-2927	3.4	11
60	Atmospheric oxidation effect of silicon–carbon nanotube anode on Li-ion battery performance. *Nanomaterials and Energy*, **2015**, 4, 153-158	1.1	1
59	Effects of carbon nanotube aspect ratio on strengthening and tribological behavior of ultra high molecular weight polyethylene composite. *Composites Part A: Applied Science and Manufacturing*, **2015**, 76, 62-72	8.4	64
58	Microstructure dependent elastic modulus variation in NiTi shape memory alloy. *Journal of Alloys and Compounds*, **2015**, 633, 71-74	5.7	11
57	Processing and Nanomechanical Properties of Hydroxyapatite-Nanotube Biocomposite **2015**, 260-283		
56	Medical Applications of Hierarchical Composites **2015**, 203-237		
55	Interfacial bonding characteristics between graphene and dielectric substrates. *Nanotechnology*, **2014**, 25, 045707	3.4	25
54	Scratch-Induced Deformation Behavior of Cold-Sprayed Aluminum Amorphous/Nanocrystalline Coatings at Multiple Load Scales. *Journal of Thermal Spray Technology*, **2014**, 23, 502-513	2.5	18
53	Nanotribological behavior of graphene nanoplatelet reinforced ultra high molecular weight polyethylene composites. *Tribology International*, **2014**, 70, 165-169	4.9	79
52	Dry sliding wear behavior of cold sprayed aluminum amorphous/nanocrystalline alloy coatings. *Surface and Coatings Technology*, **2014**, 238, 118-125	4.4	38
51	Direct observation of carbon nanotube induced strengthening in aluminum composite via in situ tensile tests. *Carbon*, **2014**, 69, 79-85	10.4	40
50	Oxidation behavior of graphene nanoplatelet reinforced tantalum carbide composites in high temperature plasma flow. *Carbon*, **2014**, 67, 398-408	10.4	54
49	Effect of Alumina Dispersion on Microstructural and Nanomechanical Properties of Pulse Electrodeposited Nickel–Alumina Composite Coatings. *Journal of Materials Science and Technology*, **2014**, 30, 808-813	9.1	10

48	Cold sprayed aluminum based glassy coating: Synthesis, wear and corrosion properties. *Surface and Coatings Technology*, **2013**, 232, 33-40	4.4	43
47	Compression Molded Ultra High Molecular Weight Polyethylene–Hydroxyapatite–Aluminum Oxide–Carbon Nanotube Hybrid Composites for Hard Tissue Replacement. *Journal of Materials Science and Technology*, **2013**, 29, 514-522	9.1	43
46	Serrated yielding during nanoindentation of thermomechanically processed novel Mg–Li–Al–Sn and Mg–Li–Al–Sn–Zn alloys. *Journal Physics D: Applied Physics*, **2013**, 46, 145304	3	14
45	Nanodynamic mechanical behavior of graphene nanoplatelet-reinforced tantalum carbide. *Scripta Materialia*, **2013**, 69, 678-681	5.6	32
44	Graphene NanoPlatelets reinforced tantalum carbide consolidated by spark plasma sintering. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2013**, 582, 338-346	5.3	117
43	Photocatalytic activity of spark plasma sintered TiO2–graphene nanoplatelet composite. *Scripta Materialia*, **2013**, 68, 719-722	5.6	18
42	Ultrahigh-pressure consolidation and deformation of tantalum carbide at ambient and high temperatures. *Acta Materialia*, **2013**, 61, 4001-4009	8.4	31
41	Boron nitride nanotubes reinforced aluminum composites prepared by spark plasma sintering: Microstructure, mechanical properties and deformation behavior. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 574, 149-156	5.3	56
40	Measurements of the adhesion energy of graphene to metallic substrates. *Carbon*, **2013**, 59, 121-129	10.4	102
39	Graphene-induced strengthening in spark plasma sintered tantalum carbide–nanotube composite. *Scripta Materialia*, **2013**, 68, 285-288	5.6	38
38	Evaluating initial unloading stiffness from elastic work-of-indentation measured in a nanoindentation experiment. *Journal of Materials Research*, **2013**, 28, 789-797	2.5	12
37	Carbon nanotube reinforced hydroxyapatite composite for orthopedic application: A review. *Materials Science and Engineering C*, **2012**, 32, 1727-1758	8.3	151
36	Unfolding the damping behavior of multilayer graphene membrane in the low-frequency regime. *ACS Nano*, **2012**, 6, 3992-4000	16.7	38
35	Graphene nanoplatelet-induced strengthening of ultrahigh molecular weight polyethylene and biocompatibility in vitro. *ACS Applied Materials & Interfaces*, **2012**, 4, 2234-41	9.5	122
34	The Tribological Behavior of Plasma-Sprayed Al-Si Composite Coatings Reinforced with Nanodiamond. *Jom*, **2012**, 64, 702-708	2.1	13
33	Synthesis and properties of bulk graphene nanoplatelets consolidated by spark plasma sintering. *Carbon*, **2012**, 50, 4068-4077	10.4	211
32	Insight into reactions and interface between boron nitride nanotube and aluminum. *Journal of Materials Research*, **2012**, 27, 2760-2770	2.5	37
31	In vivo osseointegration of nano-designed composite coatings on titanium implants. *ACS Nano*, **2011**, 5, 4790-9	16.7	68

30	Carbon nanotubes: how strong is their bond with the substrate?. *ACS Nano*, **2011**, 5, 780-7	16.7	60
29	Multi-scale hierarchy of Chelydra serpentina: microstructure and mechanical properties of turtle shell. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 1440-51	4.1	46
28	Nanohardness and Young modulus of nanopolycrystalline diamond. *Scripta Materialia*, **2011**, 64, 1019-1022	3.2	14
27	Wear behavior and in vitro cytotoxicity of wear debris generated from hydroxyapatite-carbon nanotube composite coating. *Journal of Biomedical Materials Research - Part A*, **2011**, 96, 1-12	5.4	59
26	Carbon nanotubes improve the adhesion strength of a ceramic splat to the steel substrate. *Carbon*, **2011**, 49, 4340-4347	10.4	29
25	Boron nitride nanotube reinforced hydroxyapatite composite: mechanical and tribological performance and in-vitro biocompatibility to osteoblasts. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 44-56	4.1	156
24	Spark plasma sintered tantalum carbide: Effect of pressure and nano-boron carbide addition on microstructure and mechanical properties. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 1287-1295	5.3	74
23	Spark plasma sintered tantalum carbide carbon nanotube composite: Effect of pressure, carbon nanotube length and dispersion technique on microstructure and mechanical properties. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 2538-2547	5.3	70
22	Apatite formability of boron nitride nanotubes. *Nanotechnology*, **2011**, 22, 205601	3.4	20
21	Quantification of carbon nanotube induced adhesion of osteoblast on hydroxyapatite using nano-scratch technique. *Nanotechnology*, **2011**, 22, 355703	3.4	30
20	Grain Growth Behavior of Aluminum Oxide Reinforced with Carbon Nanotube During Plasma Spraying and PostSpray Consolidation. *International Journal of Applied Ceramic Technology*, **2010**, 7, 846-855	2	23
19	Carbon nanotube reinforced metal matrix composites - a review. *International Materials Reviews*, **2010**, 55, 41-64	16.1	1043
18	Microstructure, mechanical properties, and in vitro biocompatibility of spark plasma sintered hydroxyapatite luminum oxide carbon nanotube composite. *Materials Science and Engineering C*, **2010**, 30, 1162-1169	8.3	50
17	Nanoscratch behavior of carbon nanotube reinforced aluminum coatings. *Thin Solid Films*, **2010**, 518, 1703-1711	2.2	62
16	Boron nitride nanotube reinforced polylactide-polycaprolactone copolymer composite: mechanical properties and cytocompatibility with osteoblasts and macrophages in vitro. *Acta Biomaterialia*, **2010**, 6, 3524-33	10.8	187
15	Carbon nanotube toughened hydroxyapatite by spark plasma sintering: Microstructural evolution and multiscale tribological properties. *Carbon*, **2010**, 48, 3103-3120	10.4	164
14	The hydrophobicity of a lotus leaf: a nanomechanical and computational approach. *Nanotechnology*, **2009**, 20, 305707	3.4	29
13	The nano-scratch behavior of biocompatible hydroxyapatite reinforced with aluminum oxide and carbon nanotubes. *Jom*, **2009**, 61, 63-66	2.1	28

12	Effect of carbon nanotube and aluminum oxide addition on plasma-sprayed hydroxyapatite coating's mechanical properties and biocompatibility. *Materials Science and Engineering C*, **2009**, 29, 2195-2202	8.3	71
11	Dual strengthening mechanisms induced by carbon nanotubes in roll bonded aluminum composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 523, 263-270	5.3	79
10	Carbon nanotube reinforced polylactide-caprolactone copolymer: mechanical strengthening and interaction with human osteoblasts in vitro. *ACS Applied Materials & Interfaces*, **2009**, 1, 2470-6	9.5	67
9	Tensile properties of carbon nanotube reinforced aluminum nanocomposite fabricated by plasma spray forming. *Composites Part A: Applied Science and Manufacturing*, **2009**, 40, 589-594	8.4	145
8	Study on sintering kinetics and activation energy of UO2 pellets using three different methods. *Journal of Nuclear Materials*, **2006**, 357, 88-96	3.3	35
7	X-ray diffraction line profile analysis for defect study in Cu-1 wt.% Cr-0.1 wt.% Zr alloy. *Materials Characterization*, **2005**, 54, 131-140	3.9	41
6	Texture evolution in two phase Zr 2.5 wt-%Nb through modified route. *Materials Science and Technology*, **2004**, 20, 1281-1289	1.5	6
5	X-ray diffraction line profile analysis for defect study in Zr-2.5% Nb material. *Bulletin of Materials Science*, **2004**, 27, 59-67	1.7	27
4	Effect of Prior Processing on Superplasticity of ( ) Thermomechanically Treated Ti6Al4V Alloy. *Materials and Manufacturing Processes*, **2003**, 18, 621-635	4.1	7
3	X-ray measurement of near surface residual stress in textured cold-worked stress-relieved Zr2.5%Nb pressure tube material. *Journal of Nuclear Materials*, **2002**, 303, 147-155	3.3	8
2	Polymer Matrix-Based Carbon Nanocomposites for Neural Tissue Engineering1		0
1	Assessment of Interfacial Interaction in Graphene Nanoplatelets and Carbon Fiber-Reinforced Epoxy Matrix Multiscale Composites and Its Effect on Mechanical Behavior. *Journal of Materials Engineering and Performance*,1	1.6	1