

Jyotsna Dutta Majumdar

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

110 papers	2,305 citations	25 h-index	44 g-index
112 ext. papers	2,614 ext. citations	3.1 avg, IF	5.45 L-index

#	Paper	IF	Citations
110	Laser processing of materials. <i>Sadhana - Academy Proceedings in Engineering Sciences</i> , 2003 , 28, 495-562	1	206
109	Laser material processing. <i>International Materials Reviews</i> , 2011 , 56, 341-388	16.1	166
108	Highly porous open cell Ti-foam using NaCl as temporary space holder through powder metallurgy route. <i>Materials & Design</i> , 2013 , 47, 810-819		126
107	Complete and Incomplete Wetting of Ferrite Grain Boundaries by Austenite in the Low-Alloyed Ferritic Steel. <i>Journal of Materials Engineering and Performance</i> , 2012 , 21, 667-670	1.6	84
106	Laser surface textured titanium alloy (Ti-6Al-4V) [Part II] Studies on bio-compatibility. <i>Applied Surface Science</i> , 2015 , 357, 750-758	6.7	81
105	Microstructure characterisation and process optimization of laser assisted rapid fabrication of 316L stainless steel. <i>Applied Surface Science</i> , 2005 , 247, 320-327	6.7	81
104	Direct laser cladding of SiC dispersed AISI 316L stainless steel. <i>Tribology International</i> , 2009 , 42, 750-753	4.9	77
103	Laser surface textured titanium alloy (Ti-6Al-4V): Part 1 Surface characterization. <i>Applied Surface Science</i> , 2015 , 355, 104-111	6.7	65
102	Direct laser cladding of Co on Ti-6Al-4V with a compositionally graded interface. <i>Journal of Materials Processing Technology</i> , 2009 , 209, 2237-2243	5.3	65
101	Mechanical and electrochemical properties of multiple-layer diode laser cladding of 316L stainless steel. <i>Applied Surface Science</i> , 2005 , 247, 373-377	6.7	64
100	Kinetics and mechanism of isothermal oxidation of compositionally graded yttria stabilized zirconia (YSZ) based thermal barrier coating. <i>Corrosion Science</i> , 2014 , 88, 10-22	6.8	62
99	Surface characterization and mechanical property evaluation of thermally oxidized Ti-6Al-4V. <i>Materials Characterization</i> , 2009 , 60, 513-518	3.9	59
98	Laser surface alloying of aluminium with WC+Co+NiCr for improved wear resistance. <i>Surface and Coatings Technology</i> , 2012 , 206, 3333-3341	4.4	52
97	Microstructure and Mechanical Properties of Laser Clad and Post-cladding Tempered AISI H13 Tool Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 2309-2321	3.3	47
96	Mechanical and electrochemical properties of laser surface nitrided Ti-6Al-4V. <i>Scripta Materialia</i> , 2008 , 59, 239-242	5.6	42
95	Studies on compositionally graded silicon carbide dispersed composite surface on mild steel developed by laser surface cladding. <i>Journal of Materials Processing Technology</i> , 2008 , 203, 505-512	5.3	41
94	Friction and wear behavior of laser composite surfaced aluminium with silicon carbide. <i>Wear</i> , 2007 , 262, 641-648	3.5	35

93	Compositionally graded SiC dispersed metal matrix composite coating on Al by laser surface engineering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 433, 241-250	5.3	35
92	Laser composite surfacing of AISI 304 stainless steel with titanium boride for improved wear resistance. <i>Tribology International</i> , 2007 , 40, 146-152	4.9	32
91	Microstructure and mechanical properties of nano-Y ₂ O ₃ dispersed ferritic steel synthesized by mechanical alloying and consolidated by pulse plasma sintering. <i>Philosophical Magazine</i> , 2012 , 92, 516-534	1.6	31
90	Mechanical properties of a laser-surface-alloyed magnesium-based alloy (AZ91) with nickel. <i>Scripta Materialia</i> , 2010 , 62, 579-581	5.6	31
89	Laser surface alloying of copper with chromium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 268, 216-226	5.3	30
88	Nanomechanical behavior of yttria stabilized zirconia (YSZ) based thermal barrier coating. <i>Ceramics International</i> , 2015 , 41, 5247-5256	5.1	29
87	High-Temperature Oxidation Behavior of Laser-Surface-Alloyed Ti with Si and Si + Al. <i>Oxidation of Metals</i> , 2002 , 57, 473-498	1.6	29
86	In situ dispersion of titanium boride on aluminium by laser composite surfacing for improved wear resistance. <i>Surface and Coatings Technology</i> , 2006 , 201, 1236-1242	4.4	28
85	Structure-property-correlation in laser surface alloyed AISI 304 stainless steel with WC+Ni+NiCr. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 536, 159-169	5.3	25
84	Diode Laser Assisted Surface Nitriding of Ti-6Al-4V: Properties of the Nitrided Surface. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 3031-3037	2.3	25
83	Effect of post-weld heat treatment on the tensile strength of laser beam welded Hastelloy C-276 sheets at different heat inputs. <i>Journal of Manufacturing Processes</i> , 2019 , 37, 578-594	5	24
82	Investigation on femto-second laser irradiation assisted shock peening of medium carbon (0.4% C) steel. <i>Applied Surface Science</i> , 2016 , 364, 133-140	6.7	23
81	Laser surface alloying of an Mg alloy with Al + Mn to improve corrosion resistance. <i>Lasers in Engineering</i> , 2002 , 12, 147-169		23
80	Study on uni-axial tensile strength properties of Ytterbium fiber laser welded Hastelloy C-276 sheet. <i>Optics and Laser Technology</i> , 2018 , 108, 392-403	4.2	22
79	Effect of h-BN addition on the properties of nanostructured Al ₂ O ₃ /TiB ₂ /TiN based coatings developed by combined SHS and laser surface alloying. <i>Surface and Coatings Technology</i> , 2010 , 204, 1702-1709	1.4	22
78	Interfacial Microstructural and Corrosion Characterizations of Friction Stir Welded AA6061-T6 and AISI304 Materials. <i>Metals and Materials International</i> , 2019 , 25, 752-767	2.4	22
77	Microstructure and surface mechanical properties of plasma spray deposited and post spray heat treated hydroxyapatite (HA) based composite coating on titanium alloy (Ti-6Al-4V) substrate. <i>Materials Characterization</i> , 2017 , 131, 12-20	3.9	20
76	Microstructures and Properties of Plasma Electrolytic Oxidized Ti Alloy (Ti-6Al-4V) for Bio-implant Application. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016 , 47, 788-800	2.3	18

75	Evaluation of Microstructure and Mechanical Properties of Nano-Y ₂ O ₃ -Dispersed Ferritic Alloy Synthesized by Mechanical Alloying and Consolidated by High-Pressure Sintering. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013 , 44, 2884-2894	2.3	17
74	Laser Gas Alloying of Ti-6Al-4V. <i>Physics Procedia</i> , 2011 , 12, 472-477		17
73	Studies on Direct Laser Cladding of SiC Dispersed AISI 316L Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 3001-3008	2.3	16
72	Development of in-situ composite surface on mild steel by laser surface alloying with silicon and its remelting. <i>Surface and Coatings Technology</i> , 2010 , 205, 1820-1825	4.4	16
71	Development of wear resistant composite surface on mild steel by laser surface alloying with silicon and reactive melting. <i>Materials Letters</i> , 2008 , 62, 4257-4259	3.3	15
70	Thermophysical behavior of thermal sprayed yttria stabilized zirconia based composite coatings. <i>Ceramics International</i> , 2017 , 43, 11204-11217	5.1	14
69	Study of intergranular corrosion mechanism of fiber laser welded 3-mm-thick Hastelloy C-276 sheet. <i>Corrosion Science</i> , 2019 , 157, 406-419	6.8	14
68	Laser surface engineering of titanium and its alloys for improved wear, corrosion and high-temperature oxidation resistance 2015 , 483-521		14
67	Effect of laser post-treatment on Al ₂ O ₃ -TiB ₂ -TiN composite coating with free hBN. <i>International Journal of Advanced Manufacturing Technology</i> , 2012 , 61, 559-567	3.2	14
66	Optimization of Melt Zone Area for Electron Beam Welded Hastelloy C-276 Sheet and Study of Corrosion Resistance of the Optimized Melt Zone in 3.5 wt% NaCl Aqueous Solution. <i>Arabian Journal for Science and Engineering</i> , 2019 , 44, 1617-1630	2.5	14
65	Studies on nanotribological and oxidation resistance properties of yttria stabilized zirconia (YSZ), alumina (Al ₂ O ₃) based thin films developed by pulsed laser deposition. <i>Ceramics International</i> , 2016 , 42, 7060-7071	5.1	13
64	Microstructural characterisation and property evaluation of titanium cenosphere syntactic foam developed by powder metallurgy route. <i>Powder Metallurgy</i> , 2015 , 58, 289-299	1.9	13
63	Surface Characterization and Mechanical Properties Evaluation of Boride-Dispersed Nickel-Based Coatings Deposited on Copper Through Thermal Spray Routes. <i>Journal of Thermal Spray Technology</i> , 2012 , 21, 800-809	2.5	13
62	Laser Surface Melting of AISI 316L Stainless Steel for Bio-implant Application. <i>Proceedings of the National Academy of Sciences India Section A - Physical Sciences</i> , 2018 , 88, 387-403	0.9	12
61	Compositionally Graded Thermal Barrier Coating by Hybrid Thermal Spraying Route and its Non-isothermal Oxidation Behavior. <i>Journal of Thermal Spray Technology</i> , 2013 , 22, 901-917	2.5	12
60	Introduction to Laser Assisted Fabrication of Materials. <i>Springer Series in Materials Science</i> , 2013 , 1-67	0.9	12
59	Phase Evolution and Mechanical Properties of Nano-TiO ₂ Dispersed Zr-Based Alloys by Mechanical Alloying and Conventional Sintering. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 3748-3754	2.3	11
58	Microstructural Characterization and Properties Evaluation of Ni-Based Hardfaced Coating on AISI 304 Stainless Steel by High Velocity Oxyfuel Coating Technique. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013 , 44, 372-380	2.3	11

57	Laser-Surface Alloying of Nimonic 80 with Silicon and Aluminum and its Oxidation Behavior. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 3786-3796 ^{2,3}	11
56	Laser composite surfacing of stainless steel with SiC. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, 2260-2265	1.6 10
55	Minimization of bead geometry by optimization of regression equations for laser-beam bead-on-plate welded Hastelloy C-276 sheet. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2018 , 40, 1	2 10
54	Studies on Electron Beam Welded Inconel 718 Similar Joints. <i>Procedia Manufacturing</i> , 2017 , 7, 654-659	1.5 9
53	Wear behaviour of Electron beam surface melted Inconel 718. <i>Procedia Manufacturing</i> , 2019 , 35, 866-873	1.5 9
52	Surface modification of structural material for nuclear applications by electron beam melting: enhancement of microstructural and corrosion properties of Inconel 617. <i>SN Applied Sciences</i> , 2019 , 1, 1	1.8 9
51	Investigation into the intergranular corrosion behaviour of electron beam welded Hastelloy C-276 sheet using laser displacement sensor. <i>Measurement: Journal of the International Measurement Confederation</i> , 2019 , 144, 345-365	4.6 9
50	Studies on the effect of composition and pre-heating on microstructure and mechanical properties of direct laser clad titanium aluminide. <i>Optics and Lasers in Engineering</i> , 2020 , 131, 106041	4.6 9
49	Direct laser cladding of the silicide dispersed titanium aluminide (Ti45Al5Nb0.5Si) composites. <i>Optics and Laser Technology</i> , 2018 , 106, 182-190	4.2 9
48	Effect of electron beam accelerating voltage on the melt zone area, secondary-dendrite arm spacing and fusion line microstructure of bead-on-plate welded Hastelloy C-276 sheet. <i>Optik</i> , 2019 , 183, 355-366	2.5 9
47	A mathematical model to predict the thermal history and microstructure developed in laser surface alloying. <i>Lasers in Engineering</i> , 2002 , 12, 171-190	8
46	Studies on Electron Beam Surface Melting of AISI 316 Stainless Steel and AISI 347 Stainless Steel. <i>Procedia Manufacturing</i> , 2017 , 7, 647-653	1.5 7
45	Heat-Treated TiO ₂ Plasma Spray Deposition for Bioactivity Improvement in Ti-6Al-4V Alloy. <i>Journal of Materials Engineering and Performance</i> , 2017 , 26, 6207-6218	1.6 7
44	Chemical oxidation of Ti-6Al-4V for improved wear and corrosion resistance. <i>Surface Engineering</i> , 2008 , 24, 442-446	2.6 7
43	Effect of Heat Input on Mechanical and Electrochemical Properties of Electron-Beam-Welded Inconel 718. <i>Journal of Materials Engineering and Performance</i> , 2020 , 29, 1706-1714	1.6 6
42	Wear Behavior of Plasma Spray Deposited and Post Heat-Treated Hydroxyapatite (HA)-Based Composite Coating on Titanium Alloy (Ti-6Al-4V) Substrate. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018 , 49, 3122-3132	2.3 6
41	Studies on nano-crystalline CoNiCrAlY consolidated by conventional and microwave sintering. <i>Advanced Powder Technology</i> , 2016 , 27, 72-84	4.6 6
40	Laser assisted composite surfacing of materials for improved wear resistance. <i>Physics Procedia</i> , 2010 , 5, 425-430	6

39	Microstructures, wear and corrosion resistance of laser composite surfaced austenitic stainless steel (AISI 304 SS) with tungsten carbide. <i>Optics and Laser Technology</i> , 2021 , 134, 106585	4.2	6
38	Laser Surface Alloying of AISI 304 Stainless Steel with WC+Co+NiCr for Improving Wear Resistance. <i>Procedia Manufacturing</i> , 2017 , 7, 8-14	1.5	5
37	Microstructural Evolution and Microhardness of Direct Laser Clad TiC Dispersed Titanium Aluminide (Ti45Al5Nb0.5Si) Alloy. <i>Procedia Manufacturing</i> , 2019 , 35, 840-846	1.5	5
36	Microstructure and corrosion behavior of laser induced periodic patterned titanium based alloy. <i>Optics and Laser Technology</i> , 2019 , 116, 196-213	4.2	5
35	Microstructural Characterization and Wear Behavior of Nano-Boride Dispersed Coating on AISI 304 Stainless Steel by Hybrid High Velocity Oxy-Fuel Spraying Laser Surface Melting. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 3157-3165	2.3	5
34	Microstructural change during laser welding of Inconel 718. <i>Optik</i> , 2020 , 218, 165029	2.5	5
33	Prospects and future applications for diode lasers in surface engineering. <i>Surface Engineering</i> , 2007 , 23, 73-75	2.6	5
32	High Temperature Oxidation Study of Nano-Y2O3 Dispersed Ferritic Alloys Synthesized by Mechanical Alloying and Sintering. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020 , 51, 5257-5267	2.3	5
31	Structure-property-process parameters correlation of laser additive manufactured TiC dispersed titanium aluminide (Ti45Al5Nb0.5Si) composite. <i>Intermetallics</i> , 2021 , 134, 107185	3.5	5
30	Study of melting efficiency, micro-segregation, and corrosion resistance of Ytterbium fiber laser welded Hastelloy C-276 sheet in pulsed wave mode. <i>Advances in Materials and Processing Technologies</i> , 2019 , 5, 568-581	0.8	4
29	Nano-Borides and Silicide Dispersed Composite Coating on AISI 304 Stainless Steel by Laser-Assisted HVOF Spray Deposition. <i>Journal of Thermal Spray Technology</i> , 2014 , 23, 1105-1115	2.5	4
28	Laser assisted fabrication of Co on Ti6Al4V for bio-implant application. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, 2236-2240	1.6	4
27	Surface treatment by laser-melting induced self-propagating high temperature synthesis. <i>Journal of Materials Science Letters</i> , 1995 , 14, 828-829		3
26	Studies on Electron Beam Surface Remelted Inconel 718 Superalloy. <i>Metals and Materials International</i> , 2020 , 1	2.4	3
25	Effect of Aluminum Coating on the Surface Properties of Ti-(~49 at. pct) Ni Alloy. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2015 , 46, 1951-1958	2.5	2
24	Development of graded composition and microstructure on Inconel 718 by laser surface alloying with Si, Al and ZrB2 for improvement in high temperature oxidation resistance. <i>Surface and Coatings Technology</i> , 2020 , 402, 126345	4.4	2
23	Effect of Prior Cold Deformation and Nitriding Conditions on Microstructure and Mechanical Properties of Plasma Nitrided IF Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019 , 50, 4319-4330	2.3	2
22	Advances in Metallic Materials Processing. <i>Advances in Materials Science and Engineering</i> , 2011 , 2011, 1-2	1.5	2

21	Ultrafast Laser-Induced Periodic Structuring of Titanium Alloy (Ti-6Al-4V). <i>Journal of Materials Engineering and Performance</i> , 2021 , 30, 4000-4011	1.6	2
20	Metallurgical Characteristics, Compressive Strength, and Chemical Degradation Behavior of Aluminum-Cenosphere Composite Foam Developed by Spray Forming Route. <i>Journal of Materials Engineering and Performance</i> , 2021 , 30, 5750-5762	1.6	2
19	Electron Beam Surface Treatment of 316L Austenitic Stainless Steel: Improvements in Hardness, Wear, and Corrosion Resistance. <i>Metals and Materials International</i> , 2021 , 27, 953-961	2.4	2
18	Studies on Ti, Zn and Ti + Zn Bilayer Coatings on Interstitial Free Steel for Enhancement of Wear and Corrosion Resistance. <i>Journal of Materials Engineering and Performance</i> , 2019 , 28, 4434-4442	1.6	1
17	Effect of Elemental Coating of Sn or Zn by Magnetron Sputtering on Corrosion and Wear Resistance of Interstitial-Free Steel. <i>INAE Letters</i> , 2019 , 4, 181-189	0.7	1
16	Direct Laser Cladding of Cobalt on Ti-6Al-4V with a Compositionally Graded Interface. <i>Advances in Materials Science and Engineering</i> , 2011 , 2011, 1-4	1.5	1
15	Laser Surface Processing for Tailoring of Properties by Optimization of Microstructure. <i>Advances in Civil and Industrial Engineering Book Series</i> , 2016 , 121-171	0.5	1
14	Study of Variation in Fracture Location of Electron Beam-Welded Hastelloy C-276 Sheets under Uniaxial Tension. <i>Journal of Materials Engineering and Performance</i> , 2020 , 29, 8370-8394	1.6	1
13	Microstructural characterization of laser surface-melted Inconel 718. <i>Journal of Optics (India)</i> , 2020 , 49, 494-509	1.3	1
12	Linear Reciprocating Wear of Yttria-Stabilized Zirconia-Based Composite Coatings Developed by Thermal Spray. <i>Journal of Materials Engineering and Performance</i> , 2020 , 29, 5041-5056	1.6	1
11	Studies on wear behavior of aluminium foam developed by spray forming route. <i>Materials Today: Proceedings</i> , 2019 , 19, 532-535	1.4	1
10	3-D Printing by Laser-Assisted Direct Energy Deposition (LDED): The Present Status 2021 , 6, 933		1
9	Thermal and Cold Spraying Technology in Manufacturing 2015 , 2805-2850		1
8	Studies on Microstructure and Mechanical properties of Aluminium Foam prepared by Spray Forming Route. <i>Procedia Manufacturing</i> , 2019 , 35, 861-865	1.5	0
7	Thermal and Cold Spraying Technology in Manufacturing 2013 , 1-37		0
6	Short and Ultrashort Laser Surface Processing of Alpha + Beta Titanium Alloy (Ti6Al4V): Present Status		0
5	In Situ Metal Matrix Composite Surfacing by Laser Surface Alloying. <i>Advanced Materials Research</i> , 2011 , 227, 84-91	0.5	
4	Wear and Corrosion Protection of Interstitial Free Steel by Sputter Deposition of Alloy Coating as a Novel Alternative to Galvanizing. <i>Journal of Materials Engineering and Performance</i> , 2021 , 30, 5682-5691	1.6	

- 3 Radio Frequency Magnetron Sputtering Coatings of Biomedical Implants Using Nanostructured Titanium Carbide Thin films. *Journal of Bio- and Tribo-Corrosion*, **2021**, 7, 1 2.9
- 2 Modelling of Porous Titanium and Understanding Its Mechanical Behavior Using Micro-Computed Tomography. *Journal of Materials Engineering and Performance*, 1 1.6
- 1 Advancement in Titanium Aluminide and its High Temperature Oxidation Behaviour. *Indian Institute of Metals Series*, **2022**, 295-314 0.3