

Ayan Bhowmik

List of Publications by Year in descending order

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papers

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394421

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31
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53
all docs

53
docs citations

53
times ranked

940
citing authors

#	ARTICLE	IF	CITATIONS
1	Grain-boundary precipitation in Allvac 718Plus. <i>Acta Materialia</i> , 2012, 60, 2757-2769.	7.9	156
2	Microstructural characterization of ultrafine-grain interstitial-free steel by X-ray diffraction line profile analysis. <i>Applied Physics A: Materials Science and Processing</i> , 2009, 94, 943-948.	2.3	72
3	Effect of coating thickness on microstructure, mechanical properties and fracture behaviour of cold sprayed Ti6Al4V coatings on Ti6Al4V substrates. <i>Surface and Coatings Technology</i> , 2018, 349, 303-317.	4.8	63
4	Deposition characteristics of cold sprayed Inconel 718 particles on Inconel 718 substrates with different surface conditions. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 720, 75-84.	5.6	57
5	Understanding the microstructural evolution of cold sprayed Ti-6Al-4V coatings on Ti-6Al-4V substrates. <i>Applied Surface Science</i> , 2018, 459, 492-504.	6.1	52
6	On the entropic stabilisation of an Al _{0.5} CrFeCoNiCu high entropy alloy. <i>Intermetallics</i> , 2014, 54, 148-153.	3.9	42
7	Evolution of Grain-Boundary Microstructure and Texture in Interstitial-Free Steel Processed by Equal-Channel Angular Extrusion. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009, 40, 2729-2742.	2.2	37
8	Improving microstructural and mechanical characteristics of cold-sprayed Inconel 718 deposits via local induction heat treatment. <i>Journal of Alloys and Compounds</i> , 2019, 797, 1268-1279.	5.5	35
9	Influence of Particle Velocity When Propelled Using N ₂ or N ₂ -He Mixed Gas on the Properties of Cold-Sprayed Ti6Al4V Coatings. <i>Coatings</i> , 2018, 8, 327.	2.6	30
10	Tribochemical Characterization and Tribocorrosive Behavior of CoCrMo Alloys: A Review. <i>Materials</i> , 2018, 11, 30.	2.9	30
11	Microstructure, mechanical and tribological properties of cold sprayed Ti6Al4V/CoCr composite coatings. <i>Composites Part B: Engineering</i> , 2020, 202, 108280.	12.0	28
12	Tribological behavior of cold sprayed Inconel 718 coatings at room and elevated temperatures. <i>Surface and Coatings Technology</i> , 2020, 385, 125386.	4.8	27
13	Microstructure and Mechanical Properties of Two-Phase Cr-Cr ₂ Ta Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 3283-3292.	2.2	26
14	Effect of Mo, Al and Si on the microstructure and mechanical properties of Cr-Cr ₂ Ta based alloys. <i>Journal of Alloys and Compounds</i> , 2012, 530, 169-177.	5.5	25
15	Laves phase intermetallic matrix composite in situ toughened by ductile precipitates. <i>Scripta Materialia</i> , 2017, 140, 59-62.	5.2	25
16	Effect of Substrate Surface Roughness on Microstructure and Mechanical Properties of Cold-Sprayed Ti6Al4V Coatings on Ti6Al4V Substrates. <i>Journal of Thermal Spray Technology</i> , 2019, 28, 1959-1973.	3.1	25
17	Evaluation of cold sprayed graphene nanoplates/Inconel 718 composite coatings. <i>Surface and Coatings Technology</i> , 2019, 378, 125065.	4.8	24
18	Effect of silicon additions on the high temperature oxidation behaviour of Cr-Cr ₂ Ta alloys. <i>Intermetallics</i> , 2013, 32, 373-383.	3.9	23

#	ARTICLE	IF	CITATIONS
19	The role of β -titanium ligaments in the deformation of dual phase titanium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 746, 394-405.	5.6	22
20	Alloys based on Cr-Cr ₂ Ta containing Si. <i>Intermetallics</i> , 2014, 48, 62-70.	3.9	19
21	Bonding temperature effects on the wide gap transient liquid phase bonding of Inconel 718 using BNi-2 paste filler metal. <i>Applied Surface Science</i> , 2019, 484, 1223-1233.	6.1	19
22	Microstructural evolution and interfacial crystallography in Cr-Cr ₂ Ta. <i>Intermetallics</i> , 2012, 31, 34-47.	3.9	18
23	Strategy of incorporating Ni-based braze alloy in cold sprayed Inconel 718 coating. <i>Surface and Coatings Technology</i> , 2019, 358, 1006-1012.	4.8	17
24	Study of Texture Evolution of Pure Magnesium during ECAE Using EBSD. <i>Materials Science Forum</i> , 2008, 584-586, 343-348.	0.3	16
25	Microstructural characteristics and strengthening mechanisms in a polycrystalline Ni-based superalloy under deep cold rolling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 753, 285-299.	5.6	16
26	A new beta titanium alloy system reinforced with superlattice intermetallic precipitates. <i>Scripta Materialia</i> , 2017, 140, 71-75.	5.2	15
27	Post-bond heat treatment effects on the wide gap transient liquid phase bonding of Inconel 718 with BNi-2 paste filler metal. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 766, 138267.	5.6	15
28	On the heat-treatment induced evolution of residual stress and remarkable enhancement of adhesion strength of cold sprayed Ti-6Al-4V coatings. <i>Results in Materials</i> , 2020, 7, 100119.	1.8	15
29	Microstructure and mechanical properties of Cr-Ta-Si Laves phase-based alloys at elevated temperatures. <i>Philosophical Magazine</i> , 2014, 94, 3914-3944.	1.6	14
30	Characterization of carbide particle-reinforced 316L stainless steel fabricated by selective laser melting. <i>Materials Characterization</i> , 2021, 179, 111360.	4.4	13
31	A study on the influence of Mo, Al and Si additions on the microstructure of annealed dual phase Cr-Ta alloys. <i>Journal of Materials Science</i> , 2013, 48, 3283-3293.	3.7	12
32	Deformation behaviour of [001] oriented MgO using combined in-situ nano-indentation and micro-Laue diffraction. <i>Acta Materialia</i> , 2018, 145, 516-531.	7.9	12
33	Impact of spark plasma sintering (SPS) on mullite formation in porcelains. <i>Journal of the American Ceramic Society</i> , 2018, 101, 525-535.	3.8	12
34	On the heterogeneous cooling rates in laser-clad Al-50Si alloy. <i>Surface and Coatings Technology</i> , 2021, 408, 126780.	4.8	12
35	Post-Processing of Cold Sprayed Ti-6Al-4V Coatings by Mechanical Peening. <i>Metals</i> , 2021, 11, 1038.	2.3	11
36	Microstructure and Oxidation Resistance of Cr-Ta-Si alloys. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1295, 323.	0.1	10

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37	Using coupled micropillar compression and micro-Laue diffraction to investigate deformation mechanisms in a complex metallic alloy Al ₁₃ Co ₄ . Applied Physics Letters, 2016, 108, .	3.3	10
38	Microstructure and Texture Evolution in Interstitial-Free (IF) Steel Processed by Multi-Axial Forging. Materials Science Forum, 0, 702-703, 774-777.	0.3	9
39	Allotropic transformation induced stacking faults and discontinuous coarsening in a $\hat{1}^3\hat{1}^3\hat{a}^2$ Co-base alloy. Intermetallics, 2015, 59, 95-101.	3.9	9
40	Ultra-fine Grain Materials by Severe Plastic Deformation: Application to Steels. , 2009, , 325-344.		9
41	The contrasting roles of creep and stress relaxation in the time-dependent deformation during in-situ cooling of a nickel-base single crystal superalloy. Scientific Reports, 2017, 7, 11145.	3.3	8
42	Induction transient liquid phase bonding of Inconel 718 with the nickel-based sintered brazing preform. Applied Surface Science, 2019, 473, 1024-1037.	6.1	8
43	History Dependence of the Microstructure on Time-Dependent Deformation During In-Situ Cooling of a Nickel-Based Single-Crystal Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3963-3972.	2.2	6
44	Atomic-scale oxidation of a Sm ₂ Co ₁₇ -type magnet. Acta Materialia, 2021, 220, 117343.	7.9	6
45	Data on a Laves phase intermetallic matrix composite in situ toughened by ductile precipitates. Data in Brief, 2017, 14, 489-493.	1.0	4
46	The bonding time effects on the transient liquid phase bonding of Inconel 718 using nickel-based sintered brazing preform. Applied Surface Science, 2019, 495, 143465.	6.1	3
47	In-situ diffraction based observations of slip near phase boundaries in titanium through micropillar compression. Materials Characterization, 2022, 184, 111695.	4.4	3
48	A Study of Quaternary Cr-Cr ₂ Ta Alloys - Microstructure and Mechanical Properties. Materials Research Society Symposia Proceedings, 2013, 1516, 275-281.	0.1	2
49	Investigating spatio-temporal deformation in single crystal Ni-based superalloys using in-situ diffraction experiments and modelling. Materialia, 2020, 9, 100635.	2.7	2
50	Discontinuous precipitation of Co ₃ V in a complex Co-based alloy. Philosophical Magazine, 2014, 94, 752-763.	1.6	1
51	Data on a new beta titanium alloy system reinforced with superlattice intermetallic precipitates. Data in Brief, 2018, 17, 863-869.	1.0	1
52	A New Strategy for Dissimilar Material Joining between SiC and Al Alloys through Use of High-Si Al Alloys. Metals, 2022, 12, 887.	2.3	1
53	Evolution of Crystallographic Texture During Equal Channel Angular Extrusion (ECAE) of ($\hat{1}\pm\hat{1}^2$) Brass. , 2009, , 457-464.		0