

# Ayan Bhowmik

## List of Publications by Year in descending order

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53  
papers

1,127  
citations

394421

19  
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434195

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53  
docs citations

53  
times ranked

940  
citing authors

#	ARTICLE	IF	CITATIONS
1	In-situ diffraction based observations of slip near phase boundaries in titanium through micropillar compression. <i>Materials Characterization</i> , 2022, 184, 111695.	4.4	3
2	A New Strategy for Dissimilar Material Joining between SiC and Al Alloys through Use of High-Si Al Alloys. <i>Metals</i> , 2022, 12, 887.	2.3	1
3	On the heterogeneous cooling rates in laser-clad Al-50Si alloy. <i>Surface and Coatings Technology</i> , 2021, 408, 126780.	4.8	12
4	Post-Processing of Cold Sprayed Ti-6Al-4V Coatings by Mechanical Peening. <i>Metals</i> , 2021, 11, 1038.	2.3	11
5	Characterization of carbide particle-reinforced 316L stainless steel fabricated by selective laser melting. <i>Materials Characterization</i> , 2021, 179, 111360.	4.4	13
6	Atomic-scale oxidation of a Sm <sub>2</sub> Co <sub>17</sub> -type magnet. <i>Acta Materialia</i> , 2021, 220, 117343.	7.9	6
7	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
8	Microstructure, mechanical and tribological properties of cold sprayed Ti-6Al-4V-CoCr composite coatings. <i>Composites Part B: Engineering</i> , 2020, 202, 108280.	12.0	28
9	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
10	Investigating spatio-temporal deformation in single crystal Ni-based superalloys using in-situ diffraction experiments and modelling. <i>Materialia</i> , 2020, 9, 100635.	2.7	2
11	The bonding time effects on the transient liquid phase bonding of Inconel 718 using nickel-based sintered brazing preform. <i>Applied Surface Science</i> , 2019, 495, 143465.	6.1	3
12	Evaluation of cold sprayed graphene nanoplates-Inconel 718 composite coatings. <i>Surface and Coatings Technology</i> , 2019, 378, 125065.	4.8	24
13	Effect of Substrate Surface Roughness on Microstructure and Mechanical Properties of Cold-Sprayed Ti-6Al-4V Coatings on Ti-6Al-4V Substrates. <i>Journal of Thermal Spray Technology</i> , 2019, 28, 1959-1973.	3.1	25
14	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 &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 766, 138267.	5.6	15
15	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
16	Microstructural characteristics and strengthening mechanisms in a polycrystalline Ni-based superalloy under deep cold rolling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 753, 285-299.	5.6	16
17	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
18	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

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19	Induction transient liquid phase bonding of Inconel 718 with the nickel-based sintered brazing preform. <i>Applied Surface Science</i> , 2019, 473, 1024-1037.	6.1	8
20	The role of $\beta$ -titanium ligaments in the deformation of dual phase titanium alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 746, 394-405.	5.6	22
21	Deposition characteristics of cold sprayed Inconel 718 particles on Inconel 718 substrates with different surface conditions. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 720, 75-84.	5.6	57
22	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
23	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
24	Influence of Particle Velocity When Propelled Using N <sub>2</sub> or N <sub>2</sub> -He Mixed Gas on the Properties of Cold-Sprayed Ti6Al4V Coatings. <i>Coatings</i> , 2018, 8, 327.	2.6	30
25	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
26	Data on a new beta titanium alloy system reinforced with superlattice intermetallic precipitates. <i>Data in Brief</i> , 2018, 17, 863-869.	1.0	1
27	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
28	Tribochemical Characterization and Tribocorrosive Behavior of CoCrMo Alloys: A Review. <i>Materials</i> , 2018, 11, 30.	2.9	30
29	History Dependence of the Microstructure on Time-Dependent Deformation During In-Situ Cooling of a Nickel-Based Single-Crystal Superalloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 3963-3972.	2.2	6
30	Data on a Laves phase intermetallic matrix composite in situ toughened by ductile precipitates. <i>Data in Brief</i> , 2017, 14, 489-493.	1.0	4
31	The contrasting roles of creep and stress relaxation in the time-dependent deformation during in-situ cooling of a nickel-base single crystal superalloy. <i>Scientific Reports</i> , 2017, 7, 11145.	3.3	8
32	A new beta titanium alloy system reinforced with superlattice intermetallic precipitates. <i>Scripta Materialia</i> , 2017, 140, 71-75.	5.2	15
33	Laves phase intermetallic matrix composite in situ toughened by ductile precipitates. <i>Scripta Materialia</i> , 2017, 140, 59-62.	5.2	25
34	Using coupled micropillar compression and micro-Laue diffraction to investigate deformation mechanisms in a complex metallic alloy Al <sub>13</sub> Co <sub>4</sub> . <i>Applied Physics Letters</i> , 2016, 108, .	3.3	10
35	Allotropic transformation induced stacking faults and discontinuous coarsening in a $\beta$ - $\beta'$ Co-base alloy. <i>Intermetallics</i> , 2015, 59, 95-101.	3.9	9
36	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

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37	Discontinuous precipitation of $\text{Co}_3\text{V}$ in a complex Co-based alloy. Philosophical Magazine, 2014, 94, 752-763.	1.6	1
38	On the entropic stabilisation of an $\text{Al}_{0.5}\text{CrFeCoNiCu}$ high entropy alloy. Intermetallics, 2014, 54, 148-153.	3.9	42
39	Alloys based on $\text{Cr-Cr}_2\text{Ta}$ containing Si. Intermetallics, 2014, 48, 62-70.	3.9	19
40	A study on the influence of Mo, Al and Si additions on the microstructure of annealed dual phase $\text{Cr-Cr}_2\text{Ta}$ alloys. Journal of Materials Science, 2013, 48, 3283-3293.	3.7	12
41	Effect of silicon additions on the high temperature oxidation behaviour of $\text{Cr-Cr}_2\text{Ta}$ alloys. Intermetallics, 2013, 32, 373-383.	3.9	23
42	A Study of Quaternary Cr-Cr <sub>2</sub> Ta Alloys - Microstructure and Mechanical Properties. Materials Research Society Symposia Proceedings, 2013, 1516, 275-281.	0.1	2
43	Microstructural evolution and interfacial crystallography in $\text{Cr-Cr}_2\text{Ta}$ . Intermetallics, 2012, 31, 34-47.	3.9	18
44	Effect of Mo, Al and Si on the microstructure and mechanical properties of $\text{Cr-Cr}_2\text{Ta}$ based alloys. Journal of Alloys and Compounds, 2012, 530, 169-177.	5.5	25
45	Microstructure and Mechanical Properties of Two-Phase Cr-Cr <sub>2</sub> Ta Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3283-3292.	2.2	26
46	Grain-boundary precipitation in Allvac 718Plus. Acta Materialia, 2012, 60, 2757-2769.	7.9	156
47	Microstructure and Oxidation Resistance of Cr-Ta-Si alloys. Materials Research Society Symposia Proceedings, 2011, 1295, 323.	0.1	10
48	Evolution of Grain-Boundary Microstructure and Texture in Interstitial-Free Steel Processed by Equal-Channel Angular Extrusion. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2729-2742.	2.2	37
49	Microstructural characterization of ultrafine-grain interstitial-free steel by X-ray diffraction line profile analysis. Applied Physics A: Materials Science and Processing, 2009, 94, 943-948.	2.3	72
50	Ultra-fine Grain Materials by Severe Plastic Deformation: Application to Steels. , 2009, , 325-344.		9
51	Evolution of Crystallographic Texture During Equal Channel Angular Extrusion (ECAE) of $(\hat{1}\pm\hat{1}^2)$ Brass. , 2009, , 457-464.		0
52	Study of Texture Evolution of Pure Magnesium during ECAE Using EBSD. Materials Science Forum, 2008, 584-586, 343-348.	0.3	16
53	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