Hamid Assadi

List of Publications by Year
in descending order

69 papers	6,659 citations	147726 31 h-index	98753 67 g-index
70 all docs	70 docs citations	70 times ranked	3079 citing authors

#	Article	IF	Citations
1	Bonding mechanism in cold gas spraying. Acta Materialia, 2003, 51, 4379-4394.	3.8	1,388
2	Development of a generalized parameter window for cold spray deposition. Acta Materialia, 2006, 54, 729-742.	3.8	930
3	Cold spraying â€“ A materials perspective. Acta Materialia, 2016, 116, 382-407.	3.8	607
4	From Particle Acceleration to Impact and Bonding in Cold Spraying. Journal of Thermal Spray Technology, 2009, 18, 794.	1.6	460
5	On Parameter Selection in Cold Spraying. Journal of Thermal Spray Technology, 2011, 20, 1161-1176.	1.6	300
6	Segregation engineering enables nanoscale martensite to austenite phase transformation at grain boundaries: A pathway to ductile martensite. Acta Materialia, 2013, 61, 6132-6152.	3.8	264
7	Microstructural and macroscopic properties of cold sprayed copper coatings. Journal of Applied Physics, 2003, 93, 10064-10070.	1.1	213
8	Microstructure and tribological performance of an aluminium alloy based hybrid composite produced by friction stir processing. Materials & Design, 2011, 32, 2727-2733.	5.1	211
9	Effect of friction stir welding speed on the microstructure and mechanical properties of a duplex stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 496, 262-268.	2.6	205
10	Microstructure and mechanical properties of friction stir processed AISI 316L stainless steel. Materials & Design, 2015, 67, 82-94.	5.1	132
11	Effect of applied load on the dry sliding wear behaviour and the subsurface deformation on hybrid metal matrix composite. Wear, 2013, 305, 291-298.	1.5	130
12	Prediction of solidification cracking in pulsed laser welding of 2024 aluminum alloy. Acta Materialia, 2015, 82, 491-502.	3.8	107
13	Evaluation of microstructure and wear behavior of friction stir processed cast aluminum alloy. Materials Characterization, 2012, 63, 90-97.	1.9	105
14	On the formation of grain structure during friction stir welding of duplex stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 6484-6488.	2.6	99
15	Interface evolution and bond strength when diffusion bonding materials with stable oxide films. Surface and Interface Analysis, 2001, 31, 609-618.	0.8	94
16	Improvement in cavitation erosion resistance of AISI 316L stainless steel by friction stir processing. Applied Surface Science, 2014, 308, 184-192.	3.1	89
17	Microstructural characterization in dissimilar friction stir welding between 304 stainless steel and st37 steel. Materials Characterization, 2012, 74, 28-41.	1.9	81
18	Influence of thermal properties and temperature of substrate on the quality of cold-sprayed deposits. Acta Materialia, 2017, 127, 287-301.	3.8	79

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19	Microstructure and Mechanical Properties of a Dissimilar Friction Stir Weld between Austenitic Stainless Steel and Low Carbon Steel. Journal of Materials Science and Technology, 2013, 29, 367-372.	5.6	71
20	Transient liquid phase diffusion bonding under a temperature gradient: modelling of the interface morphology. Acta Materialia, 2001, 49, 31-39.	3.8	65
21	Analysis of Thermal History and Residual Stress in Cold-Sprayed Coatings. Journal of Thermal Spray Technology, 2014, 23, 84-90.	1.6	60
22	Comment on â€˜Adiabatic shear instability is not necessary for adhesion in cold sprayâ€™. Scripta Materialia, 2019, 162, 512-514.	2.6	59
23	Crystal nucleation in deeply undercooled melts of bulk metallic glass forming systems. Acta Materialia, 2002, 50, 89-100.	3.8	58
24	Kinetics of solidification of B2 intermetallic phase in the Niâ€“Al system. Acta Materialia, 2006, 54, 2793-2800.	3.8	53
25	A Review of Advanced Composite and Nanostructured Coatings by Solid-State Cold Spraying Process. Critical Reviews in Solid State and Materials Sciences, 2019, 44, 109-156.	6.8	50
26	Kinetics of solidification of intermetallic compounds in the Niâ€“Al system. Acta Materialia, 1998, 46, 491-500.	3.8	41
27	Impact Behavior of Intrinsically Brittle Nanoparticles: A Molecular Dynamics Perspective. Journal of Thermal Spray Technology, 2014, 23, 541-550.	1.6	40
28	Mechanical behavior of CrMo steel with tempered martensite and ferriteâ€“bainiteâ€“martensite microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 483-484, 325-328.	2.6	39
29	Asymmetrical bonding in cold spraying of dissimilar materials. Applied Surface Science, 2018, 444, 621-632.	3.1	37
30	Solidification crack initiation and propagation in pulsed laser welding of wrought heat treatable aluminium alloy. Science and Technology of Welding and Joining, 2014, 19, 250-255.	1.5	33
31	Rapid solidification of intermetallic compounds. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 226-228, 133-141.	2.6	32
32	Determination of plastic constitutive properties of microparticles through single particle compression. Advanced Powder Technology, 2015, 26, 1544-1554.	2.0	31
33	Numerical modelling of melt-conditioned direct-chill casting. Applied Mathematical Modelling, 2020, 77, 1310-1330.	2.2	29
34	Site-ordering effects on element partitioning during rapid solidification of alloys. Nature, 1996, 383, 150-152.	13.7	27
35	Influence of ordering kinetics on dendritic growth morphology. Acta Materialia, 2009, 57, 1639-1647.	3.8	27
36	The role of deposition sequence in cold spraying of dissimilar materials. Surface and Coatings Technology, 2019, 367, 75-85.	2.2	27

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37	The effect of traverse speed on deposition efficiency of cold sprayed Stellite 21. Surface and Coatings Technology, 2019, 366, 24-34.	2.2	26
38	Modelling of microstructure evolution in transient-liquid-phase diffusion bonding under temperature gradient. Scripta Materialia, 2009, 60, 780-782.	2.6	23
39	Application of Disorder Trapping Theory to the Solidification of Ni3Al.. ISIJ International, 1995, 35, 574-579.	0.6	20
40	A phase-field model for non-equilibrium solidification of intermetallics. Acta Materialia, 2007, 55, 5225-5235.	3.8	20
41	A study on fracture properties of multiphase microstructures of a CrMo steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 492, 45-48.	2.6	20
42	Particle Compression Test: A Key Step towards Tailoring of Feedstock Powder for Cold Spraying. Coatings, 2020, 10, 458.	1.2	20
43	Phase-field modelling of electro-deoxidation in molten salt. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 963-974.	0.8	19
44	Size Effects of Brittle Particles in Aerosol Depositionâ€"Molecular Dynamics Simulation. Journal of Thermal Spray Technology, 2021, 30, 503-522.	1.6	19
45	Cold spray deformation and deposition of blended feedstock powders not necessarily obey the rule of mixture. Surface and Coatings Technology, 2021, 424, 127644.	2.2	19
46	The interfacial undercooling in solidification. Journal of Crystal Growth, 1997, 172, 249-258.	0.7	18
47	Strainâ€Induced Phase Transformation of MCrAlY. Advanced Engineering Materials, 2015, 17, 723-731.	1.6	16
48	Features of ceramic nanoparticle deformation in aerosol deposition explored by molecular dynamics simulation. Surface and Coatings Technology, 2022, 429, 127886.	2.2	16
49	Solid-state additive manufacturing of porous Ti-6Al-4V by supersonic impact. Applied Materials Today, 2020, 21, 100865.	2.3	15
50	Phase-field modelling of self-propagating high-temperature synthesis of NiAl. Acta Materialia, 2012, 60, 4041-4053.	3.8	14
51	Intermetallic Phase Evolution of Cold-Sprayed Ni-Ti Composite Coatings: Influence of As-Sprayed Chemical Composition. Journal of Thermal Spray Technology, 2021, 30, 119-130.	1.6	14
52	Comparison of Stellite coatings on low carbon steel produced by CGS and HVOF spraying. Surface and Coatings Technology, 2019, 372, 299-311.	2.2	13
53	Modelling of electroreduction of porous oxides in molten salt. Computational Materials Science, 2012, 53, 1-5.	1.4	10
54	Cold Spraying of Amorphous Cu50Zr50 Alloys. Journal of Thermal Spray Technology, 2014, 24, 108.	1.6	10

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55	Dynamic microstructure evolution in cold sprayed Ni Ti composite coatings. Surface and Coatings Technology, 2021, 421, 127456.	2.2	10
56	Bonding and microstructure evolution in electromagnetic pulse welding of hardenable Al alloys. Journal of Materials Processing Technology, 2021, 290, 116965.	3.1	9
57	Modelling of kinetics of solidification of intermetallic compounds. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 226-228, 70-74.	2.6	8
58	Deformation Microstructure of Cold Gas Sprayed Coatings. Materials Research Society Symposia Proceedings, 2001, 673, 1.	0.1	8
59	Modeling of Grain Structure and Heat-Affected Zone in Laser Surface Melting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2013, 44, 1041-1048.	1.0	8
60	Effect of Feedstock Powder Morphology on Cold-Sprayed Titanium Dioxide Coatings. Journal of Thermal Spray Technology, 2018, 27, 1542-1550.	1.6	7
61	Numerical and Experimental Analysis of the Deformation Behavior of CoCrFeNiMn High Entropy Alloy Particles onto Various Substrates During Cold Spraying. Journal of Thermal Spray Technology, 2022, 31, 1085-1111.	1.6	7
62	Modelling of Microstructure Evolution during Laser Processing of Intermetallic Containing Ni-Al Alloys. Metals, 2021, 11, 1051.	1.0	5
63	Development of Microstructure in Rapidly Solidified Intermetallics. Materials Research Society Symposia Proceedings, 1995, 398, 75.	0.1	1
64	Solidification of Intermetallic Compounds. Materials Research Society Symposia Proceedings, 1995, 400, 173.	0.1	1
65	Competitive Phase Selection in Fe-Ni Alloy Droplets. Materials Research Society Symposia Proceedings, 1995, 398, 51.	0.1	1
66	Intelligent driving in traffic systems with partial lane discipline. European Physical Journal B, 2013, 86, 1.	0.6	1
67	Effect of substrate on the properties of cold sprayed coating of WC-10Ni. Advances in Materials and Processing Technologies, 2020, , 1-14.	0.8	1
68	Effects of Induction and Convention Aging on Growth Kinetics and Distribution of Nanometric Î³Ê¹ Precipitates in an Ni-Based Superalloy. AIP Conference Proceedings, 2007, , .	0.3	0
69	Modelling of Microstructure Evolution during Thermal Processes â€“ A Hybrid Deterministic-Probabilistic Approach. Materials Science Forum, 0, 704-705, 63-70.	0.3	0