Richard R Chromik

List of Publications by Year
in descending order

122	3,594	109137	174990
papers	citations	35 h-index	52 g-index

122	122	122	2996
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Microstructural and Tribological Behavior of Thermal Spray CrMnFeCoNi High Entropy Alloy Coatings. Journal of Thermal Spray Technology, 2022, 31, 1285-1301.	1.6	31
2	Tribology of Self-Lubricating Metal Matrix Composites. , 2022, , 31-71.		5
3	Tribological Performance of High-Entropy Coatings (HECs): A Review. Materials, 2022, 15, 3699.	1.3	14
4	Mechanical Properties and Residual Stress Measurement of TiN/Ti Duplex Coating Using HiPIMS TiN on Cold Spray Ti. Coatings, 2022, 12, 759.	1.2	4
5	Manufacturing and Tribological Behavior of Self-Lubricating Duplex Composites: Graphite-Reinforced Polymer Composites and Polymer-Infiltrated Metal Networks. Journal of Materials Engineering and Performance, 2021, 30, 103-115.	1.2	4
6	The role of metal powder properties on the tribology of cold sprayed Ti6Al4V-TiC metal matrix composites. Surface and Coatings Technology, 2021, 411, 126974.	2.2	16
7	Short-time exposure oxidation studies on multi-component coatings and their influence on tribological behavior. Wear, 2021, 477, 203892.	1.5	6
8	Sliding wear behavior of cold-sprayed Ni-WC composite coatings: Influence OF WC content. Wear, 2021, 477, 203792.	1.5	24
9	Factors Affecting Adhesion in Metal/Ceramic Interfaces Created by Cold Spray. Journal of Thermal Spray Technology, 2021, 30, 1703-1723.	1.6	10
10	Effect of Al and Cd sacrificial coatings on the wear of steel substrates. Wear, 2021, 477, 203847.	1.5	2
11	Mechanical properties and wear resistance of industrial bearing liners in concentrated boundary-lubricated sliding. Wear, 2021, 477, 203806.	1.5	4
12	Effect of metal powder properties on the deposition characteristics of cold-sprayed Ti6Al4V-TiC coatings: An experimental and finite element study. Surfaces and Interfaces, 2021, 25, 101208.	1.5	5
13	Wear resistant solid lubricating coatings via compression molding and thermal spraying technologies. Surface and Coatings Technology, 2021, 426, 127790.	2.2	10
14	High cycle fatigue behavior of hard turned 300ÂM ultra-high strength steel. International Journal of Fatigue, 2020, 131, 105380.	2.8	15
15	Effects of Laser Cutting on Microstructure and Magnetic Properties of Non-Orientation Electrical Steel Laminations. IEEE Transactions on Magnetics, 2020, 56, 1-9.	1.2	15
16	Sliding wear of cold sprayed Ti6Al4V coatings: Effect of porosity and normal load. Wear, 2020, 450-451, 203268.	1.5	16
17	Friction transitions and connections to third bodies for a Cd coating on steel substrate. Friction, 2020, 8, 784-801.	3.4	1
18	Modelling and analysis of the effects of cutting of core laminations in electric machines. IET Electric Power Applications, 2020, 14, 2355-2361.	1.1	11

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19	Using macro and micro electrochemical methods to understand the corrosion behavior of stainless steel thermal spray coatings. Npj Materials Degradation, 2019, 3, .	2.6	21
20	Tribologically induced nanolaminate in a cold-sprayed WC-reinforced Cu matrix composite: a key to high wear resistance. Materials and Design, 2019, 182, 108009.	3.3	25
21	Influence of WC on third body behaviour during fretting of cold-sprayed Cu MoS2WC composites. Tribology International, 2019, 134, 15-25.	3.0	17
22	Adhesion strength of titanium particles to alumina substrates: A combined cold spray and LIPIT study. Surface and Coatings Technology, 2019, 361, 403-412.	2.2	30
23	Hard turning multi-performance optimization for improving the surface integrity of 300M ultra-high strength steel. International Journal of Advanced Manufacturing Technology, 2019, 104, 141-157.	1.5	11
24	Effect of Microstructure and Properties of Ni-WC Composite Coatings on Their Solid Particle Erosion Behavior. Journal of Materials Engineering and Performance, 2019, 28, 1532-1543.	1.2	9
25	The influence of powder properties on the adhesion strength and microstructural evolution of cold sprayed Ti6Al4V single splats. Materials Letters, 2019, 244, 58-61.	1.3	17
26	High temperature friction and wear behavior of cold-sprayed Ti6Al4V and Ti6Al4V-TiC composite coatings. Wear, 2019, 426-427, 357-369.	1.5	47
27	Failure dynamics of spherical and irregular shaped Ti splats deposited on sapphire by cold spray. Surface Topography: Metrology and Properties, 2019, 7, 045002.	0.9	2
28	Effect of WC morphology on dry sliding wear behavior of cold-sprayed Ni-WC composite coatings. Surface and Coatings Technology, 2019, 357, 849-863.	2.2	50
29	The Role of Temperature-Dependent Material Properties in Optimizing the Design of Permanent Magnet Motors. IEEE Transactions on Magnetics, 2018, 54, 1-4.	1.2	19
30	Dry sliding wear behaviour of cold-sprayed Cu-MoS2 and Cu-MoS2-WC composite coatings: The influence of WC. Tribology International, 2018, 123, 296-306.	3.0	37
31	Comparison of fretting behaviour of electrodeposited Zn-Ni and Cd coatings. Tribology International, 2018, 120, 535-546.	3.0	5
32	Microstructure and mechanical property connections for a punched non-oriented electrical steel lamination. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 725, 456-465.	2.6	15
33	Nanostructure, osteopontin, and mechanical properties of calcitic avian eggshell. Science Advances, 2018, 4, eaar3219.	4.7	86
34	Tribological Coatings Prepared by Cold Spray. , 2018, , 321-348.		11
35	Tribology of Self-Lubricating Metal Matrix Composites. , 2018, , 33-73.		9
36	Influence of Substrate Characteristics on Single Ti Splat Bonding to Ceramic Substrates by Cold Spray. Journal of Thermal Spray Technology, 2018, 27, 1011-1024.	1.6	12

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37	Nanomechanical testing of third bodies. Current Opinion in Solid State and Materials Science, 2018, 22, 142-155.	5.6	13
38	Room and elevated temperature sliding wear behavior of cold sprayed Ni-WC composite coatings. Surface and Coatings Technology, 2018, 350, 136-145.	2.2	57
39	Influence of Powder Morphology and Microstructure on the Cold Spray and Mechanical Properties of Ti6Al4V Coatings. Journal of Thermal Spray Technology, 2018, 27, 827-842.	1.6	43
40	Significance of Al 2 O 3 particle morphology in the microstructure evolution of cold-sprayed Al-Al 2 O 3 during unconstrained high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 684, 510-516.	2.6	15
41	Design and analysis of a toroidal tester for the measurement of core losses under axial compressive stress. Journal of Magnetism and Magnetic Materials, 2017, 432, 519-526.	1.0	9
42	Relationship between indentation plastic zone size and residual stresses in plastically deformed Fe. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 696, 1-9.	2.6	5
43	Shear-Induced Structural Changes and Origin of Ultralow Friction of Hydrogenated Diamond-like Carbon (DLC) in Dry Environment. ACS Applied Materials & Interfaces, 2017, 9, 16704-16714.	4.0	127
44	Effects of humidity on the sliding wear properties of Znâ€“Ni alloy coatings. RSC Advances, 2017, 7, 22662-22671.	1.7	9
45	Erosive wear behavior of Cold-Sprayed Ni-WC composite coating. Wear, 2017, 376-377, 566-577.	1.5	53
46	Cold Spray Deposition of Ni and WC-Reinforced Ni Matrix Composite Coatings. Journal of Thermal Spray Technology, 2017, 26, 1908-1921.	1.6	31
47	Role of Third Bodies in Friction and Wear of Cold-Sprayed Ti and Tiâ€“TiC Composite Coatings. Tribology Letters, 2017, 65, 1.	1.2	37
48	The Effect of Submicron Second-Phase Particles on the Rate of Grain Refinement in a Copper-Oxygen Alloy During Cold Spray. Journal of Thermal Spray Technology, 2017, 26, 1509-1516.	1.6	18
49	Demagnetization proximity considerations of inverter-fed permanent magnet motors. , 2017, , .		0
50	Accuracy of time domain extension formulae of core losses in nonâ€oriented electrical steel laminations under nonâ€sinusoidal excitation. IET Electric Power Applications, 2017, 11, 1131-1139.	1.1	13
51	Surface phosphonation enhances hydroxyapatite coating adhesion on polyetheretherketone and its osseointegration potential. Acta Biomaterialia, 2017, 47, 149-158.	4.1	112
52	Scaling Effects on Materials Tribology: From Macro to Micro Scale. Materials, 2017, 10, 550.	1.3	44
53	Combining in situ and online approaches to monitor interfacial processes in lubricated sliding contacts. MRS Communications, 2016, 6, 301-308.	0.8	9
54	Local Scale Microstructural Effects from the Deformation and Recrystallization of Non-Oriented Electrical Steels. Metallurgical and Materials Transactions E, 2016, 3, 250-263.	0.5	1

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55	Tribological Behavior of a Cold-Sprayed Cuâ€“MoS2 Composite Coating During Dry Sliding Wear. Tribology Letters, 2016, 62, 1.	1.2	44
56	Effect of crystallographic orientation on the tribological behavior of electrodeposited Zn coatings. RSC Advances, 2016, 6, 17360-17372.	1.7	19
57	Investigating cube-corner indentation hardness and strength relationship under quasi-static and dynamic testing regimes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 677, 534-539.	2.6	11
58	Cold spray deposition of a Ni-WC composite coating and its dry sliding wear behavior. Surface and Coatings Technology, 2016, 308, 424-434.	2.2	62
59	Effect of Shear Cutting on Microstructure and Magnetic Properties of Non-Oriented Electrical Steel. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	24
60	Comparison of Different Demagnetization Models of Permanent Magnet in Machines for Electric Vehicle Application. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	44
61	Cold-Sprayed Cu-MoS2 and Its Fretting Wear Behavior. Journal of Thermal Spray Technology, 2016, 25, 473-482.	1.6	15
62	Tribological behavior of TiN and Ti (Si,C)N coatings on cold sprayed Ti substrates. Surface and Coatings Technology, 2016, 291, 264-275.	2.2	22
63	Residual stress near single shot peening impingements determined by nanoindentation and numerical simulations. Journal of Materials Science, 2015, 50, 2284-2297.	1.7	20
64	The influence of Al2O3 particle morphology on the coating formation and dry sliding wear behavior of cold sprayed Alâ€“Al2O3 composites. Surface and Coatings Technology, 2015, 270, 324-333.	2.2	109
65	The effect of easy axis misorientation on the low induction hysteresis properties of non-oriented electrical steels. Journal of Magnetism and Magnetic Materials, 2015, 382, 124-133.	1.0	17
66	Local Magnetic Properties in Non-oriented Electrical Steel and Their Dependence on Magnetic Easy Axis and Misorientation Parameters. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 1262-1276.	1.1	14
67	Cold-spray processing of titanium and titanium alloys. , 2015, , 405-423.		13
68	Tailoring the mechanical and tribological properties of sputtered boron carbide films via the B1â^'xCx composition. Surface and Coatings Technology, 2015, 267, 2-7.	2.2	15
69	Microstructure and Mechanical Properties of Ti Cold-Spray Splats Determined by Electron Channeling Contrast Imaging and Nanoindentation Mapping. Microscopy and Microanalysis, 2015, 21, 570-581.	0.2	38
70	Fretting wear behavior of Znâ€“Ni alloy coatings. Wear, 2015, 330-331, 112-121.	1.5	18
71	Nanoindentation studies to separate thermal and optical effects in photo-softening of azo polymers. Journal of Materials Chemistry C, 2015, 3, 995-1003.	2.7	44
72	Coating induced residual stress in nonoriented electrical steel laminations. Journal of Materials Research, 2014, 29, 1737-1746.	1.2	5

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73	Microstructure Refinement of Cold-Sprayed Copper Investigated By Electron Channeling Contrast Imaging. Microscopy and Microanalysis, 2014, 20, 1499-1506.	0.2	22
74	Correlation Between AC Core Loss and Surface Magnetic Barkhausen Noise in Electric Motor Steel. Journal of Nondestructive Evaluation, 2014, 33, 663-669.	1.1	12
75	Microstructural Characterization of Mgâ€“0.3Alâ€“0.2Ca Alloy Using Ion Milling Surface Preparation Technique. Metallography, Microstructure, and Analysis, 2014, 3, 257-262.	0.5	3
76	Third Body Behavior During Dry Sliding of Cold-Sprayed Al-Al2O3 Composites: In Situ Tribometry and Microanalysis. Tribology Letters, 2014, 54, 191-206.	1.2	31
77	Magnetic domain structure and crystallographic orientation of electrical steels revealed by a forescatter detector and electron backscatter diffraction. Ultramicroscopy, 2014, 142, 40-49.	0.8	25
78	Effect of crystallographic texture on the bulk magnetic properties of non-oriented electrical steels. Journal of Magnetism and Magnetic Materials, 2014, 365, 14-22.	1.0	28
79	Effect of metallurgical factors on the bulk magnetic properties of non-oriented electrical steels. Journal of Magnetism and Magnetic Materials, 2014, 356, 42-51.	1.0	33
80	Effect of a Coating Induced Residual Stress on Magnetic Domain Structure in Non-Oriented Electrical Steels. Microscopy and Microanalysis, 2014, 20, 894-895.	0.2	2
81	Magnetic Domain Structure and Crystal Orientation Revealed by a Forescatter Detector and Electron Backscatter Diffraction.. Microscopy and Microanalysis, 2014, 20, 1458-1459.	0.2	0
82	Sliding-induced Microstructure of Cold-Sprayed Copper Coating Observed by Electron Channeling Contrast Imaging. Microscopy and Microanalysis, 2014, 20, 2104-2105.	0.2	3
83	Tribology of a Feâ€“Crâ€“B-Based Alloy Coating Fabricated by a Controlled Short-Circuit MIG Welding Process. Metallography, Microstructure, and Analysis, 2013, 2, 223-233.	0.5	10
84	Understanding the solidification and microstructure evolution during CSC-MIG welding of Feâ€“Crâ€“B-based alloy. Materials Characterization, 2013, 86, 127-138.	1.9	30
85	In situ tribometry of cold-sprayed Al-Al2O3 composite coatings. Surface and Coatings Technology, 2013, 215, 350-356.	2.2	61
86	Variations in nanomechanical properties of back-end Zrâ€“2.5Nb pressure tube material. Journal of Nuclear Materials, 2013, 442, 116-123.	1.3	7
87	Nanoindentation study of light-induced softening of supramolecular and covalently functionalized azo polymers. Journal of Materials Chemistry C, 2013, 1, 2806.	2.7	34
88	Electron Channeling Contrast Imaging of Plastic Deformation Induced by Indentation in Polycrystalline Nickel. Microscopy and Microanalysis, 2013, 19, 1620-1631.	0.2	8
89	Evaluation of strain rate sensitivity by constant load nanoindentation. Journal of Materials Science, 2012, 47, 7189-7200.	1.7	51
90	Tribological behavior of electrodeposited Zn, Znâ€“Ni, Cd and Cdâ€“Ti coatings on low carbon steel substrates. Tribology International, 2012, 56, 107-120.	3.0	64

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91	The Effect of Deposition Conditions on Adhesion Strength of Ti and Ti6Al4V Cold Spray Splats. Journal of Thermal Spray Technology, 2012, 21, 288-303.	1.6	148
92	Materials Phenomena Revealed by InÂSitu Tribometry. Jom, 2012, 64, 35-43.	0.9	31
93	Microtribological performance of Auâ€“MoS2 nanocomposite and Au/MoS2 bilayer coatings. Tribology International, 2012, 52, 144-152.	3.0	24
94	Scaling effects between micro- and macro-tribology for a Tiâ€“MoS2 coating. Wear, 2012, 274-275, 149-161.	1.5	37
95	Mechanical behavior of Ti cold spray coatings determined by a multi-scale indentation method. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 530, 253-265.	2.6	71
96	In situ tribology of nanocomposite Tiâ€“Siâ€“Câ€“H coatings prepared by PE-CVD. Wear, 2011, 272, 133-148.	1.5	51
97	Characterization of Ti cold spray coatings by indentation methods. Acta Astronautica, 2011, 69, 923-928.	1.7	37
98	Microstructure and Tribology of Spark Plasma Sintered Feâ€“Crâ€“B Metamorphic Alloy Powder. Tribology Letters, 2011, 44, 269-278.	1.2	12
99	Mechanical Property Mapping of Cold Sprayed Ti Splats and Coatings. Journal of Thermal Spray Technology, 2011, 20, 486-496.	1.6	65
100	Laser welding of Tiâ€“5Alâ€“5Vâ€“5Moâ€“3Cr. Canadian Metallurgical Quarterly, 2011, 50, 263-272.	0.4	13
101	Micro-scale sliding contacts on Au and Au-MoS2 coatings. Surface and Coatings Technology, 2010, 205, 1449-1454.	2.2	22
102	Modified ball bond shear test for determination of adhesion strength of cold spray splats. Surface and Coatings Technology, 2010, 205, 1409-1414.	2.2	44
103	Microtribological Performance of Auâ€“MoS2 and Tiâ€“MoS2 Coatings with Varying Contact Pressure. Tribology Letters, 2010, 40, 199-211.	1.2	49
104	In Situ Studies of TiC1â^'x N x Hard Coating Tribology. Tribology Letters, 2010, 40, 365-373.	1.2	20
105	The influence of carbon nanotubes on the corrosion behaviour of AZ31B magnesium alloy. Corrosion Science, 2010, 52, 3917-3923.	3.0	75
106	Micro-tribological performance of MoS2 lubricants with varying Au content. Surface and Coatings Technology, 2008, 203, 761-765.	2.2	16
107	Quantitative in situ measurement of transfer film thickness by a Newton's rings method. Wear, 2008, 264, 731-736.	1.5	52
108	Run-in behavior of nanocrystalline diamond coatings studied by in situ tribometry. Wear, 2008, 265, 477-489.	1.5	71

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109	In situ tribometry of solid lubricant nanocomposite coatings. Wear, 2007, 262, 1239-1252.	1.5	66
110	The influence of vanadium alloying on the elevated-temperature mechanical properties of thin gold films. Thin Solid Films, 2007, 515, 7919-7925.	0.8	10
111	Preparation of chameleon coatings for space and ambient environments. Thin Solid Films, 2007, 515, 6737-6743.	0.8	73
112	Temperature-dependent microtensile testing of thin film materials for application to microelectromechanical system. Microsystem Technologies, 2006, 12, 1045-1051.	1.2	25
113	Mechanical Properties of Intermetallic Compounds in the Auâ€“Sn System. Journal of Materials Research, 2005, 20, 2161-2172.	1.2	80
114	Friction of Microscale Contacts on Diamond-Like Carbon Nanocomposite Coatings. , 2005, , .		4
115	Microstructural evolution in lead-free solder alloys: Part II. Directionally solidified Sn-Ag-Cu, Sn-Cu and Sn-Ag. Journal of Materials Research, 2004, 19, 1425-1431.	1.2	57
116	Microstructural evolution in lead-free solder alloys: Part I. Cast Snâ€“Agâ€“Cu eutectic. Journal of Materials Research, 2004, 19, 1417-1424.	1.2	85
117	Imaging and mechanical property measurements of kerogen via nanoindentation. Geochimica Et Cosmochimica Acta, 2004, 68, 4113-4119.	1.6	114
118	Internal Oxidation and Mechanical Properties of Pt-IrO2 Thin Films. Materials Research Society Symposia Proceedings, 2003, 795, 445.	0.1	0
119	Calorimetric investigation of the formation of metastable silicides in Au/a-Si thin film multilayers. Journal of Applied Physics, 2002, 91, 8992-8998.	1.1	17
120	Crystal structure of Au1â^'xNixSn4 intermetallic alloys. Journal of Alloys and Compounds, 2002, 334, 79-85.	2.8	23
121	Calorimetric study of the energetics and kinetics of interdiffusion in Cu/Cu6Sn5 thinâ€film diffusion couples. Applied Physics Letters, 1995, 67, 2795-2797.	1.5	31
122	Specific Energy as a Characterizing Parameter for Laser Welded Ti-5Al-5V-5Mo-3Cr Alloy. Materials Science Forum, 0, 706-709, 2931-2936.	0.3	1