Javad Mostaghimi

List of Publications by Year
in descending order

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125 papers	2,976 citations	201385 27 h-index	189595 50 g-index
128 all docs	128 docs citations	128 times ranked	1830 citing authors

#	Article	IF	Citations
1	Columnar-structured thermal barrier coatings deposited via the water-based suspension plasma spray process. Journal Physics D: Applied Physics, 2022, 55, 204001.	1.3	3
2	Plasma assisted decomposition and reforming of greenhouse gases: A review of current status and emerging trends. Renewable and Sustainable Energy Reviews, 2022, 161, 112343.	8.2	18
3	Control of the hydrophobicity of rare earth oxide coatings deposited by solution precursor plasma spray by hydrocarbon adsorption. Journal of Materials Science and Technology, 2021, 62, 107-118.	5.6	24
4	Fast and Highâ€Throughput Synthesis of Mediumâ€and Highâ€Entropy Alloys Using Radio Frequency Inductively Coupled Plasma. Advanced Engineering Materials, 2021, 23, 2001116.	1.6	11
5	Nonlinear enthalpy transformation for transient convective phase change in Smoothed Particle Hydrodynamics (SPH). Numerical Heat Transfer, Part B: Fundamentals, 2021, 79, 255-277.	0.6	5
6	Torch Simulator: An analytical model for rapid prediction of inductively coupled plasma parameters. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 180, 106182.	1.5	4
7	A Novel Radio-Frequency Inductively Coupled Plasma Torch for Material Processing. Plasma Chemistry and Plasma Processing, 2021, 41, 1547.	1.1	2
8	Simulation of Supersonic High-Pressure Gas Atomizer for Metal Powder Production. Journal of Thermal Spray Technology, 2021, 30, 1968-1994.	1.6	2
9	Numerical Analysis of Buckling of a Single Suspension Droplet. Journal of Thermal Spray Technology, 2020, 29, 344-357.	1.6	2
10	From lotus effect to petal effect: Tuning the water adhesion of non-wetting rare earth oxide coatings. Journal of the European Ceramic Society, 2020, 40, 1692-1702.	2.8	15
11	Characteristics and control mechanism of melting process under extra magnetic force fields. Applied Thermal Engineering, 2020, 167, 114704.	3.0	16
12	Charging time and energy storage rate analysis of fin effect inside the horizontal tube for thermal energy storage. Journal of Cleaner Production, 2020, 273, 123030.	4.6	11
13	High-Sensitivity and High-Speed Single-Particle Inductively Coupled Plasma Spectrometry with the Conical Torch. Analytical Chemistry, 2020, 92, 11786-11794.	3.2	8
14	Prediction of flow characteristics in fibrous porous medium using a novel modeling algorithm and lattice Boltzmann method. Chemical Engineering Science, 2020, 221, 115647.	1.9	12
15	On the optimal heat source location of partially heated energy storage process using the newly developed simplified enthalpy based lattice Boltzmann method. Applied Energy, 2020, 275, 115387.	5.1	10
16	Splat formation mechanism of droplet-filled cold-textured groove during plasma spraying. Applied Thermal Engineering, 2020, 173, 115239.	3.0	9
17	Effect of Ni and Zn Elements on the Microstructure and Antibacterial Properties of Cu Coatings. Journal of Engineering Materials and Technology, Transactions of the ASME, 2020, 142, .	0.8	1
18	Analytical performance of the Conical torch in inductively coupled plasma optical emission spectroscopy operating methanol and 1-propanol solutions. Journal of Analytical Atomic Spectrometry, 2020, 35, 2956-2963.	1.6	4

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19	A three-dimensional analysis of drying of a single suspension droplet in high rate evaporation processes. International Journal of Heat and Mass Transfer, 2020, 157, 119791.	2.5	4
20	Coating solidification mechanism during plasma-sprayed filling the laser textured grooves. International Journal of Heat and Mass Transfer, 2019, 142, 118451.	2.5	11
21	Understanding the correlations between the mechanical robustness, coating structures and surface composition for highly-/super-hydrophobic ceramic coatings. Surface and Coatings Technology, 2019, 378, 124929.	2.2	7
22	Analytical performance of the Conical torch in axially viewed inductively coupled plasma optical emission spectroscopy. Journal of Analytical Atomic Spectrometry, 2019, 34, 2126-2135.	1.6	7
23	Splats Formation, Interaction and Residual Stress Evolution in Thermal Spray Coating Using a Hybrid Computational Model. Journal of Thermal Spray Technology, 2019, 28, 359-377.	1.6	13
24	Time-resolved particle image velocimetry and 3D simulations of single particles in the new conical ICP torch. Journal of Analytical Atomic Spectrometry, 2019, 34, 469-479.	1.6	10
25	A Novel ICP Torch with Conical Geometry. Plasma Chemistry and Plasma Processing, 2019, 39, 359-376.	1.1	12
26	Fabrication of Superhydrophobic Ceramic Coatings via Solution Precursor Plasma Spray Under Atmospheric and Low-Pressure Conditions. Journal of Thermal Spray Technology, 2019, 28, 242-254.	1.6	20
27	Conical Torch: The Next-Generation Inductively Coupled Plasma Source for Spectrochemical Analysis. Analytical Chemistry, 2018, 90, 3036-3044.	3.2	13
28	Superhydrophobic ceramic coating: Fabrication by solution precursor plasma spray and investigation of wetting behavior. Journal of Colloid and Interface Science, 2018, 523, 35-44.	5.0	43
29	Efficient one-step fabrication of ceramic superhydrophobic coatings by solution precursor plasma spray. Materials Letters, 2018, 211, 24-27.	1.3	37
30	Effects of conical nozzle and its geometry on properties of an inductively coupled plasma jet used for optical fabrication. Applied Thermal Engineering, 2018, 128, 785-794.	3.0	8
31	Effects of laser surface remelting on the molten salt corrosion resistance of yttria-stabilized zirconia coatings. Ceramics International, 2018, 44, 22645-22655.	2.3	28
32	Fabrication of micro-/nano-structured superhydrophobic ceramic coating with reversible wettability via a novel solution precursor vacuum plasma spray process. Materials and Design, 2018, 160, 974-984.	3.3	31
33	Heat Transfer in DC and RF Plasma Torches. , 2018, , 2523-2597.		1
34	Droplet Impact and Solidification in Plasma Spraying. , 2018, , 2967-3008.		4
35	Numerical Study of Suspension Plasma Spraying. Journal of Thermal Spray Technology, 2017, 26, 12-36.	1.6	28
36	Study of TLP bonding of Ti-6Al-4V alloy produced by vacuum plasma spray forming and forging. Materials and Design, 2017, 121, 355-366.	3.3	16

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37	3D modeling and analysis of the thermo-mechanical behavior of metal foam heat sinks. International Journal of Thermal Sciences, 2017, 116, 199-213.	2.6	15
38	Sporicidal efficacy of thermal-sprayed copper alloy coating. Canadian Journal of Microbiology, 2017, 63, 384-391.	0.8	6
39	Heat Transfer During High Temperature Gas Flow Through Metal Foam Heat Exchangers. Journal of Heat Transfer, 2017, 139, .	1.2	3
40	New smoothed particle hydrodynamics (SPH) formulation for modeling heat conduction with solidification and melting. Numerical Heat Transfer, Part B: Fundamentals, 2017, 71, 299-312.	0.6	35
41	Spray Impingement Fundamentals. , 2017, , 177-220.		0
42	Modeling Residual Stress Development in Thermal Spray Coatings: Current Status and Way Forward. Journal of Thermal Spray Technology, 2017, 26, 1115-1145.	1.6	27
43	Application of Compressible Volume of Fluid Model in Simulating the Impact and Solidification of Hollow Spherical ZrO2 Droplet on a Surface. Journal of Thermal Spray Technology, 2017, 26, 1959-1981.	1.6	19
44	Heat Transfer in DC AND RF Plasma Torches. , 2017, , 1-76.		3
45	COALESCENCE AND AGGLOMERATION OF DROPLETS SPRAYED ON A SUBSTRATE. Atomization and Sprays, 2017, 27, 81-94.	0.3	5
46	Droplet Impact and Solidification in Plasma Spraying. , 2017, , 1-42.		1
47	Thermal Spray Coating: A New Way of Protecting Wood. BioResources, 2016, 12, .	0.5	3
48	The 2016 Thermal Spray Roadmap. Journal of Thermal Spray Technology, 2016, 25, 1376-1440.	1.6	243
49	The Effect of Heat Treatment on Mechanical Properties of Thermally Sprayed Sandwich Structure Beams. Journal of Thermal Spray Technology, 2016, 25, 105-112.	1.6	1
50	Bubble entrapment and escape from sprayed paint films. Progress in Organic Coatings, 2016, 97, 153-165.	1.9	7
51	Superhydrophobic Ceramic Coatings by Solution Precursor Plasma Spray. Scientific Reports, 2016, 6, 24670.	1.6	43
52	Thermal Behavior of Aluminum Alloy Metal Foam Heat Sinks: A Computational and Experimental Approach. , 2015, , .		2
53	The effect of porosity on the hot corrosion failure of thermal barrier coatings. Modelling and Simulation in Materials Science and Engineering, 2015, 23, 075001.	0.8	5
54	Applying Contact Angle to a Two-Dimensional Multiphase Smoothed Particle Hydrodynamics Model. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	0.8	23

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55	Thermal Plasma Sources: How Well are They Adopted to Process Needs?. Plasma Chemistry and Plasma Processing, 2015, 35, 421-436.	1.1	73
56	The electrochemical hydrogen storage properties of Ti0.72Zr0.28Mn1.6V0.4 alloy synthesized by vacuum plasma spraying and vacuum copper boat induction melting: A comparative study. International Journal of Hydrogen Energy, 2015, 40, 15569-15577.	3.8	7
57	Thermocapillary migration of a deformable droplet. International Journal of Heat and Mass Transfer, 2014, 73, 616-626.	2.5	17
58	Formation of liquid sheets by deposition of droplets on a surface. Journal of Colloid and Interface Science, 2014, 418, 292-299.	5.0	20
59	Application of Multiphase Particle Methods in Atomization and Breakup Regimes of Liquid Jets. , 2014, , .		2
60	High Temperature Metal Foam Heat Exchanger. , 2014, , .		0
61	Surface Tension-Driven Flows within Drying Paint Films. , 2014, , .		0
62	Effect of ammonia gas addition to the synthesis environment of single-walled carbon nanotubes on their surface chemistry. Chemical Engineering Journal, 2013, 230, 80-92.	6.6	4
63	Arc welding, plasma cutting and plasma spraying. Journal Physics D: Applied Physics, 2013, 46, 220301.	1.3	4
64	Mono-Disperse Spray Generation by a Flow Focusing Atomizer: A Numerical Study. , 2012, , .		0
65	Analytical and Numerical Modeling of Conductive and Convective Heat Transfer Through Open-Cell Metal Foams. , 2012, , .		1
66	Droplet Impact: A GPU Based Smoothed Particle Hydrodynamics (SPH) Approach. , 2012, , .		1
67	Plasma Sprayed Coating Using Mullite and Mixed Alumina/Silica Powders. Journal of Thermal Spray Technology, 2012, 21, 825-830.	1.6	20
68	Study of Corrosion Behavior of Arc Sprayed Aluminum Coating on Mild Steel. Journal of Thermal Spray Technology, 2012, 21, 1195-1202.	1.6	82
69	Accurate implementation of forcing terms for two-phase flows into SIMPLE algorithm. International Journal of Multiphase Flow, 2012, 45, 40-52.	1.6	17
70	CFD Simulation of Single-walled Carbon Nanotube Growth in an RF Induction Thermal Plasma Process. , 2011, , .		0
71	Radio Frequency Thermal Plasma: The Cutting Edge Technology in Production of Single-Walled Carbon Nanotubes. Journal of Thermal Science and Technology, 2011, 6, 307-322.	0.6	6
72	Recovery of Cu and valuable metals from E-waste using thermal plasma treatment. Jom, 2011, 63, 24-28.	0.9	16

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73	Effects of injection angle on the measurement of surface tension coefficient by drop weight method. Physics and Chemistry of Liquids, 2011, 49, 32-51.	0.4	6
74	Analysis of the Microstructure of Thermal Spray Coatings: A Modeling Approach. Journal of Thermal Spray Technology, 2010, 19, 736-744.	1.6	11
75	A fast response thermocouple for internal combustion engine surface temperature measurements. Experimental Thermal and Fluid Science, 2010, 34, 183-189.	1.5	59
76	A volume-of-fluid interfacial flow solver with advected normals. Computers and Fluids, 2010, 39, 1401-1410.	1.3	39
77	AEROSOL CHARACTERIZATION OF CONCENTRIC PNEUMATIC NEBULIZER USED IN INDUCTIVELY COUPLED PLASMAÂ—MASS SPECTROMETRY (ICP-MS). Atomization and Sprays, 2010, 20, 415-433.	0.3	5
78	Preliminary Testing of Metal-Based Thermal Barrier Coating in a Spark-Ignition Engine. Journal of Engineering for Gas Turbines and Power, 2010, 132, .	0.5	6
79	MODELING LARGE-SCALE SYNTHESIS OF SINGLE-WALLED CARBON NANOTUBES BY INDUCTION THERMAL PLASMA. High Temperature Material Processes, 2010, 14, 45-61.	0.2	0
80	Effect of Substrate Concave Pattern on Splat Formation of Yttria-Stabilized Zirconia in Atmospheric Plasma Spraying. Journal of Thermal Spray Technology, 2009, 18, 609-618.	1.6	12
81	The Impact of a Partially Molten YSZ Particle. Journal of Thermal Spray Technology, 2009, 18, 957-964.	1.6	24
82	Synthesis of single-walled carbon nanotubes by induction thermal plasma. Nano Research, 2009, 2, 800.	5.8	49
83	Numerical Simulation of Solid Particle Ablation in Thermal Plasmas using CIPâ€VOF Method. IEEJ Transactions on Electrical and Electronic Engineering, 2009, 4, 488-496.	0.8	1
84	A comparison of hyperbolic and parabolic models of phase change of a pure metal. International Journal of Heat and Mass Transfer, 2009, 52, 1177-1184.	2.5	23
85	Preliminary Testing of Metal-Based Thermal Barrier Coating in a Spark-Ignition Engine. , 2009, , .		3
86	Measurement of Surface Tension, Viscosity, and Density at High Temperatures by Free-Fall Drop Oscillation. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2008, 39, 280-290.	1.0	9
87	Microstructure and Creep Behavior of Plasma-Sprayed Yttria Stabilized Zirconia Thermal Barrier Coatings. Journal of Thermal Spray Technology, 2008, 17, 244-253.	1.6	11
88	The Effect of Undercooling on Solidification of YSZ Splats. Journal of Thermal Spray Technology, 2008, 17, 646-654.	1.6	6
89	A New Highly Efficient High-Power DC Plasma Torch. IEEE Transactions on Plasma Science, 2008, 36, 1068-1069.	0.6	15
90	Three-Dimensional Modeling of an Inductively Coupled Plasma Torch for Spectroscopic Analysis. IEEE Transactions on Plasma Science, 2008, 36, 1040-1041.	0.6	18

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91	A stochastic coating model to predict the microstructure of plasma sprayed zirconia coatings. Modelling and Simulation in Materials Science and Engineering, 2008, 16, 065006.	0.8	15
92	Modeling of continuous synthesis of single-walled carbon nanotubes by RF induction thermal plasma. , 2008, , .		0
93	Modeling fragmentation of plasma-sprayed particles impacting on a solid surface at room temperature. Comptes Rendus - Mecanique, 2007, 335, 351-356.	2.1	17
94	Creep Behavior of Plasma-Sprayed Zirconia Thermal Barrier Coatings. Journal of the American Ceramic Society, 2007, 90, 2873-2878.	1.9	13
95	Modeling the impact of a molten metal droplet on a solid surface using variable interfacial thermal contact resistance. Journal of Materials Science, 2007, 42, 9-18.	1.7	66
96	3D Modeling of Transport Phenomena and the Injection of the Solution Droplets in the Solution Precursor Plasma Spraying. Journal of Thermal Spray Technology, 2007, 16, 736-743.	1.6	13
97	Investigation of Splat Curling up in Thermal Spray Coatings. Journal of Thermal Spray Technology, 2006, 15, 531-536.	1.6	50
98	Modeling Injection of Dense Liquid Sprays in Radio Frequency Inductively Coupled Plasmas. Plasma Chemistry and Plasma Processing, 2005, 25, 193-214.	1.1	8
99	Modeling interfacial heat transfer from single or multiple deforming droplets. International Journal of Computational Fluid Dynamics, 2005, 19, 105-113.	0.5	5
100	Formation of fingers around the edges of a drop hitting a metal plate with high velocity. Journal of Fluid Mechanics, 2004, 510, 353-373.	1.4	125
101	Effect of Substrate Temperature on Splashing of Molten Tin Droplets. Journal of Heat Transfer, 2004, 126, 445-452.	1.2	25
102	A Numerical Model for Flow Simulation in Spray Nozzles. , 2004, , .		0
103	Effect of Interfacial Heat Transfer on Molten Tin Jet Breakup in an Oil Tank. , 2004, , .		0
104	Second order accurate volume tracking based on remapping for triangular meshes. Journal of Computational Physics, 2003, 188, 100-122.	1.9	51
105	Adhesion of tin droplets impinging on a stainless steel plate: effect of substrate temperature and roughness. Science and Technology of Advanced Materials, 2003, 4, 173-181.	2.8	16
106	Splat formation in plasma-spray coating process. Pure and Applied Chemistry, 2002, 74, 441-445.	0.9	33
107	Interaction of Shock and Expansion Wave With Solid Particles in Supersonic Flows. , 2002, , 399.		0
108	Dynamics of Splat Formation in Plasma Spray Coating Process. Plasma Chemistry and Plasma Processing, 2002, 22, 59-84.	1.1	80

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109	Volume Tracking on Triangular Meshes. , 2002, , .		0
110	Computer simulation of argon-nitrogen and argon-oxygen inductively coupled plasmas. Spectrochimica Acta, Part B: Atomic Spectroscopy, 1997, 52, 369-386.	1.5	46
111	Two-Temperature Model for the Simulation of Atmospheric-Pressure Helium ICPs. Applied Spectroscopy, 1995, 49, 1390-1402.	1.2	32
112	Study of 3-D mixing of a cold jet with a transverse plasma stream. International Journal of Heat and Mass Transfer, 1993, 36, 3897-3907.	2.5	20
113	Mathematical modelling of the 3-D mixing in an induction plasma reactor. International Journal of Heat and Mass Transfer, 1993, 36, 3909-3919.	2.5	19
114	Computer simulation of atmospheric-pressure helium inductively coupled plasma discharges. Spectrochimica Acta, Part B: Atomic Spectroscopy, 1993, 48, 789-807.	1.5	28
115	Effect of frequency on local thermodynamic equilibrium conditions in an inductively coupled argon plasma at atmospheric pressure. Journal of Applied Physics, 1990, 68, 2643-2648.	1.1	71
116	Analysis of an RF induction plasma torch with a permeable ceramic wall. Canadian Journal of Chemical Engineering, 1989, 67, 929-936.	0.9	4
117	Two-dimensional electromagnetic field effects in induction plasma modelling. Plasma Chemistry and Plasma Processing, 1989, 9, 25-44.	1.1	178
118	Application of a two-dimensional model in the simulation of an analytical inductively coupled plasma discharge. Spectrochimica Acta, Part B: Atomic Spectroscopy, 1989, 44, 657-666.	1.5	43
119	A twoâ€temperature model of the inductively coupled rf plasma. Journal of Applied Physics, 1987, 61, 1753-1760.	1.1	149
120	Heating of powders in an r.f. inductively coupled plasma under dense loading conditions. Plasma Chemistry and Plasma Processing, 1987, 7, 29-52.	1.1	107
121	Plasma-particle interaction effects in induction plasma modeling under dense loading conditions. International Journal of Heat and Mass Transfer, 1985, 28, 1327-1336.	2.5	156
122	AN ANALYSIS OF THE COMPUTER MODELING OF THE FLOW AND TEMPERATURE FIELDS IN AN INDUCTIVELY COUPLED PLASMA. Numerical Heat Transfer, 1985, 8, 187-201.	0.5	46
123	Parametric study of the flow and temperature fields in an inductively coupled r.f. plasma torch. Plasma Chemistry and Plasma Processing, 1984, 4, 199-217.	1.1	90
124	An Investigation of Metal and Ceramic Thermal Barrier Coatings in a Spark-Ignition Engine. SAE International Journal of Engines, 0, 3, 115-125.	0.4	10
125	An Analytical Technique for Optimization of Mechanical Performance of Foam Core Sandwich Structures. Materials Science Forum, 0, 706-709, 1373-1378.	0.3	0