Anthony B Murphy

List of Publications by Year
in descending order

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299 papers	13,843 citations	28242 55 h-index	26591 107 g-index
301 all docs	301 docs citations	301 times ranked	9910 citing authors

#	Article	IF	Citations
1	Efficiency of solar water splitting using semiconductor electrodes. International Journal of Hydrogen Energy, 2006, 31, 1999-2017.	3.8	786
2	Band-gap determination from diffuse reflectance measurements of semiconductor films, and application to photoelectrochemical water-splitting. Solar Energy Materials and Solar Cells, 2007, 91, 1326-1337.	3.0	745
3	The 2017 Plasma Roadmap: Low temperature plasma science and technology. Journal Physics D: Applied Physics, 2017, 50, 323001.	1.3	710
4	The 2012 Plasma Roadmap. Journal Physics D: Applied Physics, 2012, 45, 253001.	1.3	511
5	Transport coefficients of argon, nitrogen, oxygen, argon-nitrogen, and argon-oxygen plasmas. Plasma Chemistry and Plasma Processing, 1994, 14, 451-490.	1.1	466
6	Gram positive and Gram negative bacteria differ in their sensitivity to cold plasma. Scientific Reports, 2016, 6, 38610.	1.6	435
7	The 2020 plasma catalysis roadmap. Journal Physics D: Applied Physics, 2020, 53, 443001.	1.3	362
8	Transport coefficients of air, argon-air, nitrogen-air, and oxygen-air plasmas. Plasma Chemistry and Plasma Processing, 1995, 15, 279-307.	1.1	332
9	Thermal plasma waste treatment. Journal Physics D: Applied Physics, 2008, 41, 053001.	1.3	314
10	Plasma-aided nanofabrication: where is the cutting edge?. Journal Physics D: Applied Physics, 2007, 40, 2223-2241.	1.3	236
11	Atmospheric pressure plasmas: Infection control and bacterial responses. International Journal of Antimicrobial Agents, 2014, 43, 508-517.	1.1	208
12	The effects of metal vapour in arc welding. Journal Physics D: Applied Physics, 2010, 43, 434001.	1.3	192
13	Thermal plasmas in gas mixtures. Journal Physics D: Applied Physics, 2001, 34, R151-R173.	1.3	188
14	Transport Coefficients of Hydrogen and Argonâ€“Hydrogen Plasmas. Plasma Chemistry and Plasma Processing, 2000, 20, 279-297.	1.1	179
15	Plasma nanoscience: setting directions, tackling grand challenges. Journal Physics D: Applied Physics, 2011, 44, 174001.	1.3	172
16	Thermal plasmas for nanofabrication. Journal Physics D: Applied Physics, 2011, 44, 174025.	1.3	166
17	Atmospheric gas plasmaâ€“induced ROS production activates TNF-ASK1 pathway for the induction of melanoma cancer cell apoptosis. Molecular Biology of the Cell, 2014, 25, 1523-1531.	0.9	166
18	Modelling of thermal plasmas for arc welding: the role of the shielding gas properties and of metal vapour. Journal Physics D: Applied Physics, 2009, 42, 194006.	1.3	162

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19	Diffusion in equilibrium mixtures of ionized gases. Physical Review E, 1993, 48, 3594-3603.	0.8	144
20	Plasma Catalysis as an Alternative Route for Ammonia Production: Status, Mechanisms, and Prospects for Progress. ACS Sustainable Chemistry and Engineering, 2018, 6, 15-31.	3.2	144
21	SF₆-alternative gases for application in gas-insulated switchgear. Journal Physics D: Applied Physics, 2018, 51, 153001.	1.3	143
22	The 2022 Plasma Roadmap: low temperature plasma science and technology. Journal Physics D: Applied Physics, 2022, 55, 373001.	1.3	139
23	Initial operation of the Wendelstein 7AS advanced stellarator. Plasma Physics and Controlled Fusion, 1989, 31, 1579-1596.	0.9	124
24	A comparison of treatments of diffusion in thermal plasmas. Journal Physics D: Applied Physics, 1996, 29, 1922-1932.	1.3	123
25	Single-step ambient-air synthesis of graphene from renewable precursors as electrochemical genosensor. Nature Communications, 2017, 8, 14217.	5.8	122
26	Computational investigation of arc behavior in an auto-expansion circuit breaker contaminated by ablated nozzle vapor. IEEE Transactions on Plasma Science, 2002, 30, 706-719.	0.6	120
27	Treatment of non-equilibrium phenomena in thermal plasma flows. Journal Physics D: Applied Physics, 2008, 41, 183001.	1.3	117
28	Modified Kubelkaâ€“Munk model for calculation of the reflectance of coatings with optically-rough surfaces. Journal Physics D: Applied Physics, 2006, 39, 3571-3581.	1.3	111
29	Demixing in free-burning arcs. Physical Review E, 1997, 55, 7473-7494.	0.8	105
30	Transport coefficients of helium and argon-helium plasmas. IEEE Transactions on Plasma Science, 1997, 25, 809-814.	0.6	105
31	A computational investigation of the effectiveness of different shielding gas mixtures for arc welding. Journal Physics D: Applied Physics, 2009, 42, 115205.	1.3	94
32	Time-dependent calculations of molten pool formation and thermal plasma with metal vapour in gas tungsten arc welding. Journal Physics D: Applied Physics, 2010, 43, 434009.	1.3	93
33	Modelling of gasâ€“metal arc welding taking into account metal vapour. Journal Physics D: Applied Physics, 2010, 43, 434008.	1.3	92
34	Metal vapour causes a central minimum in arc temperature in gasâ€“metal arc welding through increased radiative emission. Journal Physics D: Applied Physics, 2010, 43, 022001.	1.3	91
35	A self-consistent three-dimensional model of the arc, electrode and weld pool in gasâ€“metal arc welding. Journal Physics D: Applied Physics, 2011, 44, 194009.	1.3	89
36	Kinetic modelling of NH₃production in N₂â€“H₂non-equilibrium atmospheric-pressure plasma catalysis. Journal Physics D: Applied Physics, 2017, 50, 154005.	1.3	88

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37	Identifying Surface Reaction Intermediates in Plasma Catalytic Ammonia Synthesis. ACS Catalysis, 2020, 10, 14763-14774.	5.5	86
38	A Perspective on Arc Welding Research: The Importance of the Arc, Unresolved Questions and Future Directions. Plasma Chemistry and Plasma Processing, 2015, 35, 471-489.	1.1	85
39	Calculated rate constants of the chemical reactions involving the main byproducts SO₂F, SOF₂, SO₂F₂of SF₆decomposition in power equipment. Journal Physics D: Applied Physics, 2016, 49, 155502.	1.3	82
40	Cold plasma treatment for cotton seed germination improvement. Scientific Reports, 2018, 8, 14372.	1.6	82
41	Influence of shielding gas composition on arc properties in TIG welding. Science and Technology of Welding and Joining, 2008, 13, 225-231.	1.5	74
42	Plasma Catalytic Synthesis of Ammonia Using Functionalized-Carbon Coatings in an Atmospheric-Pressure Non-equilibrium Discharge. Plasma Chemistry and Plasma Processing, 2016, 36, 917-940.	1.1	74
43	Mathematical model and laserâ€scattering temperature measurements of a directâ€current plasma torch discharging into air. Journal of Applied Physics, 1993, 73, 4759-4769.	1.1	72
44	Numerical simulation of GMAW process using Ar and an Arâ€“CO2 gas mixture. Welding in the World, Le Soudage Dans Le Monde, 2016, 60, 345-353.	1.3	72
45	Simulation of Arc Characteristics in Miniature Circuit Breaker. IEEE Transactions on Plasma Science, 2010, 38, 2306-2311.	0.6	71
46	Numerical analysis of the influence of splitter-plate erosion on an air arc in the quenching chamber of a low-voltage circuit breaker. Journal Physics D: Applied Physics, 2010, 43, 434011.	1.3	71
47	Thermophysical properties of nitrogen plasmas under thermal equilibrium and non-equilibrium conditions. Physics of Plasmas, 2011, 18, .	0.7	68
48	Low-voltage circuit breaker arcsâ€”simulation and measurements. Journal Physics D: Applied Physics, 2013, 46, 273001.	1.3	66
49	Simulation of melt pool behaviour during additive manufacturing: Underlying physics and progress. Additive Manufacturing, 2020, 31, 100909.	1.7	66
50	Does carbon doping of TiO2 allow water splitting in visible light? Comments on â€œNanotube enhanced photoresponse of carbon modified (CM)-n-TiO2 for efficient water splittingâ€• Solar Energy Materials and Solar Cells, 2008, 92, 363-367.	3.0	65
51	Transport coefficients of plasmas in mixtures of nitrogen and hydrogen. Chemical Physics, 2012, 398, 64-72.	0.9	65
52	Theoretical study of the neutral decomposition of SF₆in the presence of H₂O and O₂in discharges in power equipment. Journal Physics D: Applied Physics, 2016, 49, 385203.	1.3	65
53	Pseudomonas aeruginosa Biofilm Response and Resistance to Cold Atmospheric Pressure Plasma Is Linked to the Redox-Active Molecule Phenazine. PLoS ONE, 2015, 10, e0130373.	1.1	61
54	Properties of C₄F₇Nâ€“CO₂thermal plasmas: thermodynamic properties, transport coefficients and emission coefficients. Journal Physics D: Applied Physics, 2018, 51, 155206.	1.3	59

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55	A study of S-doped TiO2 for photoelectrochemical hydrogen generation from water. Journal of Materials Science, 2008, 43, 1389-1399.	1.7	57
56	Foundations of High-Pressure Thermal Plasmas. Plasma Sources Science and Technology, 2018, 27, 063001.	1.3	56
57	The influence of electrode erosion on the air arc in a low-voltage circuit breaker. Journal of Applied Physics, 2009, 106, .	1.1	55
58	Fundamental physicochemical properties of SF₆-alternative gases: a review of recent progress. Journal Physics D: Applied Physics, 2020, 53, 173001.	1.3	55
59	Evaluation of SF₆-alternative gas C5-PFK based on arc extinguishing performance and electric strength. Journal Physics D: Applied Physics, 2017, 50, 385202.	1.3	54
60	Dielectric breakdown properties of SF6â€“N2 mixtures at 0.01â€“1.6 MPa and 300â€“3000 K. Journal of Applied Physics, 2013, 113, .	1.1	53
61	Heat generation by optically and thermally interacting aggregates of gold nanoparticles under illumination. Nanotechnology, 2009, 20, 375702.	1.3	52
62	Hydrogen Plasma Processing of Iron Ore. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1561-1594.	1.0	50
63	Temperature measurement in thermal plasmas by Rayleigh scattering. Journal Physics D: Applied Physics, 1992, 25, 634-643.	1.3	48
64	Thermophysical properties of carbonâ€“argon and carbonâ€“helium plasmas. Journal Physics D: Applied Physics, 2011, 44, 355207.	1.3	48
65	Influence of metal vapour on arc temperatures in gasâ€“metal arc welding: convection versus radiation. Journal Physics D: Applied Physics, 2013, 46, 224004.	1.3	48
66	Spectral characteristics of cotton seeds treated by a dielectric barrier discharge plasma. Scientific Reports, 2017, 7, 5601.	1.6	48
67	Production of Ammonia by Heterogeneous Catalysis in a Packed-Bed Dielectric-Barrier Discharge: Influence of Argon Addition and Voltage. IEEE Transactions on Plasma Science, 2014, 42, 2338-2339.	0.6	47
68	Cataphoresis in electric arcs. Journal Physics D: Applied Physics, 1998, 31, 3383-3390.	1.3	46
69	Thermodynamic properties and transport coefficients of arc lamp plasmas: argon, krypton and xenon. Journal Physics D: Applied Physics, 2014, 47, 295202.	1.3	46
70	Modelling of arc welding: The importance of including the arc plasma in the computational domain. Vacuum, 2010, 85, 579-584.	1.6	45
71	Modeling of the physics and chemistry of thermal plasma waste destruction. Physics of Plasmas, 2001, 8, 2565-2571.	0.7	43
72	Formation of titanium nanoparticles from a titanium tetrachloride plasma. Journal Physics D: Applied Physics, 2004, 37, 2841-2847.	1.3	43

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73	A numerical model of non-equilibrium thermal plasmas. I. Transport properties. Physics of Plasmas, 2013, 20, 033508.	0.7	43
74	Dual-layered nanocomposite membrane incorporating graphene oxide and halloysite nanotube for high osmotic power density and fouling resistance. Journal of Membrane Science, 2018, 564, 382-393.	4.1	43
75	Metal vapour behaviour in thermal plasma of gas tungsten arcs during welding. Science and Technology of Welding and Joining, 2008, 13, 566-572.	1.5	42
76	Simulation Study of the Influence of Wall Ablation on Arc Behavior in a Low-Voltage Circuit Breaker. IEEE Transactions on Plasma Science, 2009, 37, 261-269.	0.6	42
77	Numerical analysis of fume formation mechanism in arc welding. Journal Physics D: Applied Physics, 2010, 43, 434012.	1.3	41
78	Investigation on critical breakdown electric field of hot sulfur hexafluoride/carbon tetrafluoride mixtures for high voltage circuit breaker applications. Journal of Applied Physics, 2013, 114, 103301.	1.1	41
79	Plasma-deposited Ge nanoisland films on Si: is Stranskiâ€“Krastanow fragmentation unavoidable?. Journal Physics D: Applied Physics, 2008, 41, 092001.	1.3	40
80	Characterization of heat treatment-induced pore structure changes in cold-sprayed titanium. Materials Characterization, 2017, 132, 69-75.	1.9	40
81	Prediction of gas tungsten arc welding properties in mixtures of argon and hydrogen. IEEE Transactions on Plasma Science, 1997, 25, 925-930.	0.6	39
82	Plasma Destruction of Ozone Depleting Substances. Plasma Chemistry and Plasma Processing, 2002, 22, 371-385.	1.1	39
83	Three-dimensional modelling of arc behaviour and gas shield quality in tandem gasâ€“metal arc welding using anti-phase pulse synchronization. Journal Physics D: Applied Physics, 2011, 44, 185205.	1.3	39
84	Thermal plasma properties for Arâ€“Cu, Arâ€“Fe and Arâ€“Al mixtures used in welding plasmas processes: II. Transport coefficients at atmospheric pressure. Journal Physics D: Applied Physics, 2013, 46, 415207.	1.3	38
85	Laserâ€scattering measurement of temperature profiles of a freeâ€burning arc. Applied Physics Letters, 1992, 60, 1304-1306.	1.5	37
86	The effects of plasma treatment on bacterial biofilm formation on vertically-aligned carbon nanotube arrays. RSC Advances, 2015, 5, 5142-5148.	1.7	37
87	Diffusion of atomic hydrogen in an atmospheric-pressure free-burning arc discharge. Physical Review E, 1995, 52, 2999-3009.	0.8	36
88	An investigation of a dc dielectric barrier discharge using a disc of glass beads. Journal Physics D: Applied Physics, 2000, 33, 1487-1492.	1.3	36
89	Electron Heating in the Measurement of Electron Temperature by Thomson Scattering: Are Thermal Plasmas Thermal?. Physical Review Letters, 2002, 89, 025002.	2.9	36
90	Optical properties of an optically rough coating from inversion of diffuse reflectance measurements. Applied Optics, 2007, 46, 3133.	2.1	36

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91	Numerical simulation of metal vapor behavior in arc plasma. Surface and Coatings Technology, 2008, 202, 5302-5305.	2.2	36
92	Study of the dielectric breakdown properties of hot SF6â€“CF4 mixtures at 0.01â€“1.6â€‰MPa. Journal of Applied Physics, 2013, 114, .	1.1	36
93	Demixing Due to Frictional Forces in an Electric Arc. Physical Review Letters, 1994, 73, 1797-1800.	2.9	35
94	Analysis of energy flow in gas metal arc welding processes through self-consistent three-dimensional process simulation. International Journal of Heat and Mass Transfer, 2014, 68, 215-223.	2.5	35
95	Calculation of thermodynamic properties and transport coefficients of C5F10O-CO2 thermal plasmas. Journal of Applied Physics, 2017, 122, .	1.1	35
96	Numerical Analysis of the Effect of the Chamber Width and Outlet Area on the Motion of an Air Arc Plasma. IEEE Transactions on Plasma Science, 2008, 36, 2831-2837.	0.6	34
97	Towards developing multiscale-multiphysics models and their surrogates for digital twins of metal additive manufacturing. Additive Manufacturing, 2021, 46, 102089.	1.7	34
98	The case for digital twins in metal additive manufacturing. JPhys Materials, 2021, 4, 040401.	1.8	33
99	Modified Fowlerâ€“Milne method for the spectroscopic measurement of temperature and composition of multielement thermal plasmas. Review of Scientific Instruments, 1994, 65, 3423-3427.	0.6	32
100	Effects of shielding gas composition on arc profile and molten pool dynamics in gas metal arc welding of steels. Journal Physics D: Applied Physics, 2014, 47, 465202.	1.3	31
101	Dominant particles and reactions in a two-temperature chemical kinetic model of a decaying SF₆ arc. Journal Physics D: Applied Physics, 2016, 49, 105502.	1.3	30
102	Calculation and application of combined diffusion coefficients in thermal plasmas. Scientific Reports, 2015, 4, 4304.	1.6	29
103	Visualization and mechanisms of splashing erosion of electrodes in a DC air arc. Journal Physics D: Applied Physics, 2017, 50, 47LT01.	1.3	29
104	Invited paper: Waves in the edge plasma during ion cyclotron resonance heating. Fusion Engineering and Design, 1990, 12, 79-92.	1.0	28
105	A comparison of measurements and calculations of demixing in free-burning arcs. Journal Physics D: Applied Physics, 2000, 33, 2183-2188.	1.3	28
106	Diffusion in two-temperature thermal plasmas. Physical Review E, 2002, 66, 056407.	0.8	28
107	Theoretical investigation of the decay of an SF₆gas-blast arc using a two-temperature hydrodynamic model. Journal Physics D: Applied Physics, 2013, 46, 065203.	1.3	28
108	Foundations of plasma catalysis for environmental applications. Plasma Sources Science and Technology, 2022, 31, 053002.	1.3	28

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109	Destruction of ozone-depleting substances in a thermal plasma reactor. Applied Physics Letters, 1998, 73, 459-461.	1.5	27
110	Thomson scattering diagnostics of thermal plasmas:â€‚â€‚Laser heating of electrons and the existence of local thermodynamic equilibrium. Physical Review E, 2004, 69, 016408.	0.8	27
111	Prediction of energy source properties of free-burning arcs. Vacuum, 2006, 80, 1190-1194.	1.6	27
112	Thermophysical Properties of High-Temperature Reacting Mixtures of Carbon and Water in the Range 400â€“30,000 K and 0.1â€“10 atm. Part 1: Equilibrium Composition and Thermodynamic Properties. Plasma Chemistry and Plasma Processing, 2012, 32, 75-96.	1.1	27
113	Influence of droplets in gasâ€“metal arc welding: new modelling approach, and application to welding of aluminium. Science and Technology of Welding and Joining, 2013, 18, 32-37.	1.5	27
114	Prediction of the dielectric strength for c-C₄F₈mixtures with CF₄, CO₂, N₂, O₂and air by Boltzmann equation analysis. Journal Physics D: Applied Physics, 2014, 47, 425204.	1.3	27
115	Numerical simulation of the flow characteristics inside a novel plasma spray torch. Journal Physics D: Applied Physics, 2019, 52, 335203.	1.3	27
116	Direct plasma printing of nano-gold from an inorganic precursor. Journal of Materials Chemistry C, 2019, 7, 6369-6374.	2.7	27
117	CO2-shielded arc as a high-intensity heat source. Vacuum, 2006, 80, 1195-1198.	1.6	25
118	Numerical Modeling of an Arâ€“H2 Radio-Frequency Plasma Reactor under Thermal and Chemical Nonequilibrium Conditions. Plasma Chemistry and Plasma Processing, 2007, 27, 189-204.	1.1	24
119	Numerical Analysis of Arc Characteristics of Splitting Process Considering Ferromagnetic Plate in Low-Voltage Arc Chamber. IEEE Transactions on Plasma Science, 2010, 38, 3219-3225.	0.6	24
120	Birth of ball lightning. Journal of Geophysical Research, 2012, 117, .	3.3	24
121	A computational model of gas tungsten arc welding of stainless steel: the importance of considering the different metal vapours simultaneously. Journal Physics D: Applied Physics, 2018, 51, 395202.	1.3	24
122	Electrical wire explosion as a source of underwater shock waves. Journal Physics D: Applied Physics, 2021, 54, 403001.	1.3	24
123	Temperature-independent, nonoxidative methane conversion in nanosecond repetitively pulsed DBD plasma. Sustainable Energy and Fuels, 2021, 5, 787-800.	2.5	24
124	Modelling Study to Compare the Flow and Heat Transfer Characteristics of Low-Power Hydrogen, Nitrogen and Argon Arc-Heated Thrusters. Plasma Science and Technology, 2010, 12, 692-701.	0.7	23
125	Study of Different Models of the Wall Ablation Process in Capillary Discharge. IEEE Transactions on Plasma Science, 2010, 38, 1033-1041.	0.6	23
126	Thermophysical Properties of High Temperature Reacting Mixtures of Carbon and Water in the Range 400â€“30,000ÂK and 0.1â€“10Âatm. Part 2: Transport Coefficients. Plasma Chemistry and Plasma Processing, 2012, 32, 495-518.	1.1	23

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127	Experimental and theoretical study of internal fault arc in a closed container. Journal Physics D: Applied Physics, 2014, 47, 505204.	1.3	23
128	Investigation of the bilayer region of metal vapor in a helium tungsten inert gas arc plasma on stainless steel by imaging spectroscopy. Journal Physics D: Applied Physics, 2019, 52, 354003.	1.3	23
129	Application of Plasma-Printed Paper-Based SERS Substrate for Cocaine Detection. Sensors, 2021, 21, 810.	2.1	23
130	Two-Temperature Chemical-Nonequilibrium Modelling of a High-Velocity Argon Plasma Flow in a Low-Power Arcjet Thruster. Plasma Chemistry and Plasma Processing, 2014, 34, 559-577.	1.1	22
131	Draft Genome Sequence of Pseudomonas aeruginosa ATCC 9027 (DSM 1128), an Important Rhamnolipid Surfactant Producer and Sterility Testing Strain. Genome Announcements, 2015, 3, .	0.8	22
132	A unified model for coupling mesoscopic dynamics of keyhole, metal vapor, arc plasma, and weld pool in laser-arc hybrid welding. Journal of Manufacturing Processes, 2019, 41, 119-134.	2.8	22
133	Combined diffusion coefficients in equilibrium mixtures of dissociating gases. Journal of Chemical Physics, 1993, 99, 1340-1343.	1.2	21
134	Laser-scattering temperature measurements of a free-burning arc in nitrogen. Journal Physics D: Applied Physics, 1994, 27, 1492-1498.	1.3	21
135	Characterization of the behavior of chemically reactive species in a nonequilibrium inductively coupled argon-hydrogen thermal plasma under pulse-modulated operation. Journal of Applied Physics, 2006, 100, 103303.	1.1	21
136	Model-based parameter optimization for arc welding process simulation. Applied Mathematical Modelling, 2020, 81, 386-400.	2.2	21
137	Understanding the nanoparticle formation during electrical wire explosion using a modified moment model. Plasma Sources Science and Technology, 2019, 28, 085010.	1.3	20
138	Decomposition mechanism and kinetics of iso-C4 perfluoronitrile (C4F7N) plasmas. Journal of Applied Physics, 2019, 126, .	1.1	20
139	Generation of Long Laminar Plasma Jets: Experimental and Numerical Analyses. Plasma Chemistry and Plasma Processing, 2019, 39, 377-394.	1.1	20
140	Numerical study of the metal vapour transport in tungsten inert-gas welding in argon for stainless steel. Applied Mathematical Modelling, 2020, 79, 713-728.	2.2	20
141	Sustainable Ammonia Synthesis from Nitrogen and Water by Oneâ€Step Plasma Catalysis. Energy and Environmental Materials, 2023, 6, .	7.3	20
142	Modeling Study on the Flow, Heat Transfer and Energy Conversion Characteristics of Low-Power Arc-Heated Hydrogen/Nitrogen Thrusters. Plasma Chemistry and Plasma Processing, 2010, 30, 707-731.	1.1	19
143	A desktop computer model of the arc, weld pool and workpiece in metal inert gas welding. Applied Mathematical Modelling, 2017, 44, 91-106.	2.2	19
144	Thermal decomposition characteristics and kinetic analysis of C₄F₇N/CO₂ gas mixture. Journal Physics D: Applied Physics, 2020, 53, 055502.	1.3	19

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145	Numerical Investigation of Heat Transfer During Submerged Arc Welding Phenomena by Coupled DEM-ISPH Simulation. International Journal of Heat and Mass Transfer, 2021, 171, 121062.	2.5	19
146	A two-dimensional capillary discharge model considering the ablation and deposition processes. Journal of Applied Physics, 2011, 110, .	1.1	18
147	Prediction of the critical reduced electric field strength for carbon dioxide and its mixtures with 50% O₂and 50% H₂from Boltzmann analysis for gas temperatures up to 3500 K at atmospheric pressure. Journal Physics D: Applied Physics, 2014, 47, 325203.	1.3	18
148	Prediction of the critical reduced electric field strength for carbon dioxide and its mixtures with copper vapor from Boltzmann analysis for a gas temperature range of 300â€‰K to 4000â€‰K at 0.4â€‰MPa. Journal of Applied Physics, 2015, 117, .	1.1	18
149	Numerical simulation of fume formation process in GMA welding. Welding in the World, Le Soudage Dans Le Monde, 2018, 62, 1331-1339.	1.3	18
150	Low-pressure plasma-induced physical vapor deposition of advanced thermal barrier coatings: Microstructures, modelling and mechanisms. Materials Today Physics, 2021, 21, 100481.	2.9	18
151	A Statistical Mechanical View of the Determination of the Composition of Multi?Temperature Plasmas. Plasma Chemistry and Plasma Processing, 2004, 24, 435-446.	1.1	17
152	Metal Vapour Behaviour in Gas Tungsten Arc Thermal Plasma during Welding. Welding in the World, Le Soudage Dans Le Monde, 2008, 52, 82-88.	1.3	17
153	Calculation of combined diffusion coefficients in SF6-Cu mixtures. Physics of Plasmas, 2014, 21, 103506.	0.7	17
154	Numerical Simulation of Nonequilibrium Species Diffusion in a Low-Power Nitrogenâ€“Hydrogen Arcjet Thruster. Plasma Chemistry and Plasma Processing, 2017, 37, 877-895.	1.1	17
155	Numerical study on thermal non-equilibrium of arc plasmas in TIG welding processes using a two-temperature model. Welding in the World, Le Soudage Dans Le Monde, 2017, 61, 197-207.	1.3	17
156	Multilayer weak shocks generated by restrike during underwater electrical explosion of Cu wires. Applied Physics Letters, 2019, 115, .	1.5	17
157	Alfven wave modes in a cylindrical plasma with finite edge density. Plasma Physics and Controlled Fusion, 1986, 28, 597-612.	0.9	16
158	Glass sphere discharges for ozone production. IEEE Transactions on Plasma Science, 2002, 30, 180-181.	0.6	16
159	Numerical modelling of the nonequilibrium expansion process of argon plasma flow through a nozzle. Journal Physics D: Applied Physics, 2013, 46, 505205.	1.3	16
160	Chemical Non-equilibrium Simulation of Anode Attachment of an Argon Transferred Arc. Plasma Chemistry and Plasma Processing, 2020, 40, 261-282.	1.1	16
161	Detonation of a nitromethane-based energetic mixture driven by electrical wire explosion. Journal Physics D: Applied Physics, 2022, 55, 05LT01.	1.3	16
162	Investigation on critical breakdown electric field of hot carbon dioxide for gas circuit breaker applications. Journal Physics D: Applied Physics, 2015, 48, 055201.	1.3	15

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163	Mixing of multiple metal vapours into an arc plasma in gas tungsten arc welding of stainless steel. Journal Physics D: Applied Physics, 2017, 50, 43LT03.	1.3	15
164	Numerical study of the effects and transport mechanisms of iron vapour in tungsten inert-gas welding in argon. Journal Physics D: Applied Physics, 2020, 53, 044004.	1.3	15
165	Combined Radio-Frequency and Forced-Air Drying of Alfalfa. Journal of Microwave Power and Electromagnetic Energy, 1992, 27, 223-232.	0.4	14
166	The influence of demixing on the properties of a freeâ€burning arc. Applied Physics Letters, 1996, 69, 328-330.	1.5	14
167	Plasma Destruction of Gaseous and Liquid Wastes. Annals of the New York Academy of Sciences, 1999, 891, 106-123.	1.8	14
168	Evaluation of methods for determining food surface temperature in the presence of low-pressure cool plasma. Innovative Food Science and Emerging Technologies, 2012, 15, 23-30.	2.7	14
169	Modeling of Thermal Plasma Processes: The Importance of Twoâ€Way Plasmaâ€Surface Interactions. Plasma Processes and Polymers, 2017, 14, 1600177.	1.6	14
170	Investigation of transient metal vapour transport processes in helium arc welding by imaging spectroscopy. Journal Physics D: Applied Physics, 2020, 53, 425202.	1.3	14
171	Analysis of dynamic plasma behaviors in gas metal arc welding by imaging spectroscopy. Yosetsu Gakkai Ronbunshu/Quarterly Journal of the Japan Welding Society, 2015, 33, 118-125.	0.1	14
172	Modelling and diagnostics of plasma chemical processes in mixed-gas arcs. Pure and Applied Chemistry, 1996, 68, 1137-1142.	0.9	13
173	Plasma-controlled metal catalyst saturation and the initial stage of carbon nanostructure array growth. Journal of Applied Physics, 2008, 104, .	1.1	13
174	Numerical analysis of direct-current microdischarge for space propulsion applications using the particle-in-cell/Monte Carlo collision (PIC/MCC) method. Journal Physics D: Applied Physics, 2017, 50, 165203.	1.3	13
175	Pulsed Townsend measurement of electron swarm parameters in C4F7Nâ€“CO2 and C4F7Nâ€“N2 mixtures as eco-friendly insulation gas. Journal of Applied Physics, 2022, 131, .	1.1	13
176	Numerical Analysis of Metal Vapor Behavior with Multi-diffusion System in TIG Welding of Stainless Steel. Yosetsu Gakkai Ronbunshu/Quarterly Journal of the Japan Welding Society, 2009, 27, 4s-7s.	0.1	12
177	Numerical Investigations of the Influence of Metal Vapour in GMA Welding. Welding in the World, Le Soudage Dans Le Monde, 2011, 55, 114-120.	1.3	12
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