

# Nick G Glumac

## List of Publications by Year in descending order

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110  
papers

3,599  
citations

126708

33  
h-index

143772

57  
g-index

110  
all docs

110  
docs citations

110  
times ranked

2267  
citing authors

#	ARTICLE	IF	CITATIONS
1	TEMPERATURE MEASUREMENTS OF ALUMINUM PARTICLES BURNING IN CARBON DIOXIDE. Combustion Science and Technology, 2005, 177, 485-511.	1.2	290
2	Combustion of nanoaluminum at elevated pressure and temperature behind reflected shock waves. Combustion and Flame, 2006, 145, 703-713.	2.8	209
3	Evidence for the transition from the diffusion-limit in aluminum particle combustion. Proceedings of the Combustion Institute, 2007, 31, 2021-2028.	2.4	190
4	Temporal and Spatial Evolution of a Laser Spark in Air. AIAA Journal, 2005, 43, 1984-1994.	1.5	127
5	Thermal stability of potassium carbonate near its melting point. Thermochemica Acta, 1998, 316, 1-9.	1.2	122
6	The effect of ambient pressure on laser-induced plasmas in air. Optics and Lasers in Engineering, 2007, 45, 27-35.	2.0	116
7	Molecular filtered Rayleigh scattering applied to combustion. Measurement Science and Technology, 2001, 12, 452-466.	1.4	107
8	Oxidizer and Pressure Effects on the Combustion of 10-micron Aluminum Particles. Journal of Propulsion and Power, 2005, 21, 577-582.	1.3	107
9	A correlation for burn time of aluminum particles in the transition regime. Proceedings of the Combustion Institute, 2009, 32, 1887-1893.	2.4	105
10	Emission spectroscopy of flame fronts in aluminum suspensions. Proceedings of the Combustion Institute, 2007, 31, 2011-2019.	2.4	104
11	Synthesis of oxide nanoparticles in low pressure flames. Scripta Materialia, 1999, 11, 149-158.	0.5	96
12	An Assessment of In-Person and Remotely Operated Laboratories. Journal of Engineering Education, 2003, 92, 57-64.	1.9	83
13	Combustion Characteristics of Aluminum Hydride at Elevated Pressure and Temperature. Journal of Propulsion and Power, 2004, 20, 427-431.	1.3	76
14	A Practical Approach to PIV Uncertainty Analysis. , 2010, , .		71
15	Gas-Phase Reaction in Nanoaluminum Combustion. Combustion Science and Technology, 2010, 182, 842-857.	1.2	69
16	On nanoparticle aggregation during vapor phase synthesis. Scripta Materialia, 1999, 11, 545-552.	0.5	65
17	REFLECTED SHOCK IGNITION AND COMBUSTION OF ALUMINUM AND NANOCOMPOSITE THERMITE POWDERS. Combustion Science and Technology, 2007, 179, 457-476.	1.2	58
18	Emissivity of Aluminum-Oxide Particle Clouds: Application to Pyrometry of Explosive Fireballs. Journal of Thermophysics and Heat Transfer, 2010, 24, 301-308.	0.9	57

#	ARTICLE	IF	CITATIONS
19	Heat transfer effects in nano-aluminum combustion at high temperatures. Combustion and Flame, 2014, 161, 295-302.	2.8	55
20	Combustion of Aluminum Suspensions in Hydrocarbon Flame Products. Journal of Propulsion and Power, 2014, 30, 1047-1054.	1.3	53
21	Synthesis of tungsten oxide (WO <sub>3</sub> ) nanorods using carbon nanotubes as templates by hot filament chemical vapor deposition. Materials Letters, 2006, 60, 771-774.	1.3	48
22	High rate synthesis of nanophase materials. Scripta Materialia, 1997, 9, 101-104.	0.5	47
23	Decomposition of Aluminum Hydride Under Solid Rocket Motor Conditions. Journal of Propulsion and Power, 2007, 23, 457-464.	1.3	46
24	Optical depth measurements of fireballs from aluminized high explosives. Optics and Lasers in Engineering, 2009, 47, 1009-1015.	2.0	45
25	Particle size and gas environment effects on blast and overpressure enhancement in aluminized explosives. Proceedings of the Combustion Institute, 2013, 34, 2205-2212.	2.4	45
26	Emission and laser absorption spectroscopy of flat flames in aluminum suspensions. Combustion and Flame, 2017, 180, 230-238.	2.8	43
27	On ALO Emission Spectroscopy as a Diagnostic in Energetic Materials Testing. Propellants, Explosives, Pyrotechnics, 2013, 38, 577-585.	1.0	42
28	Temperature Inhomogeneity during Multibubble Sonoluminescence. Angewandte Chemie - International Edition, 2010, 49, 1079-1082.	7.2	41
29	Growth of nanodiamond/carbon-nanotube composites with hot filament chemical vapor deposition. Diamond and Related Materials, 2008, 17, 79-83.	1.8	40
30	Two-Dimensional Temperature Field Measurements Using a Molecular Filter Based Technique. Combustion Science and Technology, 1997, 125, 351-369.	1.2	38
31	High speed temperature, pressure, and water vapor concentration measurement in explosive fireballs using tunable diode laser absorption spectroscopy. Optics and Lasers in Engineering, 2018, 110, 186-192.	2.0	37
32	Scalable high-rate production of non-agglomerated nanopowders in low pressure flames. Materials Letters, 1998, 34, 148-153.	1.3	36
33	Flame Emission Spectroscopy for Equivalence Ratio Monitoring. Applied Spectroscopy, 1998, 52, 658-662.	1.2	34
34	Control of the Shear Layer Above a Supersonic Cavity Using Energy Deposition. AIAA Journal, 2008, 46, 2987-2997.	1.5	34
35	Absorption Spectroscopy Measurements in Optically Dense Explosive Fireballs Using a Modeless Broadband Dye Laser. Applied Spectroscopy, 2009, 63, 1075-1080.	1.2	33
36	Diagnostics and modeling of strained fuel-rich acetylene/oxygen flames used for diamond deposition. Combustion and Flame, 1996, 105, 321-331.	2.8	32

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37	Diamond synthesis in a low-pressure flat flame. <i>Thin Solid Films</i> , 1992, 212, 122-126.	0.8	31
38	Parametric effects on thin film growth and uniformity in an atmospheric pressure impinging jet CVD reactor. <i>Journal of Crystal Growth</i> , 2004, 267, 22-34.	0.7	30
39	Quantitative Analysis of Soil Organic Carbon Using Laser-Induced Breakdown Spectroscopy: An Improved Method. <i>Soil Science Society of America Journal</i> , 2010, 74, 1922-1928.	1.2	28
40	Large-area diamond film growth in a low-pressure flame. <i>Materials Letters</i> , 1993, 18, 119-122.	1.3	27
41	Fluid flow and transport processes in a large area atmospheric pressure stagnation flow CVD reactor for deposition of thin films. <i>International Journal of Heat and Mass Transfer</i> , 2004, 47, 4979-4994.	2.5	27
42	Formation and consumption of SiO in powder synthesis flames. <i>Combustion and Flame</i> , 2001, 124, 702-711.	2.8	26
43	Characterization of high-explosive detonations using broadband infrared external cavity quantum cascade laser absorption spectroscopy. <i>Journal of Applied Physics</i> , 2019, 126, .	1.1	26
44	Elucidating uranium monoxide spectral features from a laser-produced plasma. <i>Optics Express</i> , 2018, 26, 20319.	1.7	26
45	Diagnostics and Modeling of Nanopowder Synthesis in Low Pressure Flames. <i>Journal of Materials Research</i> , 1998, 13, 2572-2579.	1.2	25
46	OH CONCENTRATION PROFILES OVER ALUMINA, QUARTZ, AND PLATINUM SURFACES USING LASER-INDUCED FLUORESCENCE SPECTROSCOPY IN LOW-PRESSURE HYDROGEN/OXYGEN FLAMES. <i>Combustion Science and Technology</i> , 2005, 177, 793-817.	1.2	25
47	Hydrogen synthesis via combustion of fuel-rich natural gas/air mixtures at elevated pressure. <i>International Journal of Hydrogen Energy</i> , 2005, 30, 893-902.	3.8	23
48	Using magnesium to maximize heat generated by reactive Al/Zr nanolaminates. <i>Combustion and Flame</i> , 2015, 162, 2855-2864.	2.8	23
49	Time-resolved formation of uranium and silicon oxides subsequent to the laser ablation of U <sub>3</sub> Si <sub>2</sub> . <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2020, 170, 105925.	1.5	22
50	Combustion Measurements of Fuel-Rich Aluminum and Molybdenum Oxide Nano-Composite Mixtures. <i>Propellants, Explosives, Pyrotechnics</i> , 2010, 35, 93-99.	1.0	21
51	Early time spectroscopic measurements during high-explosive detonation breakout into air. <i>Shock Waves</i> , 2013, 23, 131-138.	1.0	20
52	Ultraviolet Absorption Spectroscopy in Optically Dense Fireballs Using Broadband Second-Harmonic Generation of a Pulsed Modeless Dye Laser. <i>Applied Spectroscopy</i> , 2014, 68, 517-524.	1.2	20
53	Numerical Study of Mixed Convection Flow in an Impinging Jet CVD Reactor for Atmospheric Pressure Deposition of Thin Films. <i>Journal of Heat Transfer</i> , 2004, 126, 764-775.	1.2	17
54	Depression of melting point for protective aluminum oxide films. <i>Chemical Physics Letters</i> , 2015, 618, 63-65.	1.2	17

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55	Control of Thin Film Growth in Chemical Vapor Deposition Manufacturing Systems: A Feasibility Study. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2002, 124, 715-724.	1.3	16
56	Temperature profile measurements in the near-substrate region of low-pressure diamond-forming flames. Combustion and Flame, 2002, 130, 261-276.	2.8	16
57	Energy Deposition Applied to a Transverse Jet in a Supersonic Crossflow. AIAA Journal, 2010, 48, 1662-1672.	1.5	16
58	NO and OH Spectroscopic Vibrational Temperature Measurements in a Post-Shock Relaxation Region. AIAA Journal, 2010, 48, 1434-1443.	1.5	16
59	Explosive Initiation of Various Forms of Ti/2B Reactive Materials. Propellants, Explosives, Pyrotechnics, 2014, 39, 454-462.	1.0	16
60	Optical Depth Effects on Aluminum Oxide Spectral Emissivity. Journal of Thermophysics and Heat Transfer, 2015, 29, 74-82.	0.9	16
61	Flame Temperature Predictions and Comparison with Experiment in High Flow Rate, Fuel-Rich Acetylene/Oxygen Flames. Combustion Science and Technology, 1997, 122, 383-398.	1.2	14
62	Detection of AlO and TiO by Laser-Induced Fluorescence in Powder Synthesis Flames. Combustion Science and Technology, 2000, 157, 129-139.	1.2	14
63	Low-Pressure Flame Deposition of Nanostructured Oxide Films. Journal of the American Ceramic Society, 1998, 81, 2753-2756.	1.9	13
64	Reactive Liners Prepared Using Powders of Aluminum and Aluminum-Magnesium Alloys. Propellants, Explosives, Pyrotechnics, 2016, 41, 605-611.	1.0	13
65	Diamond growth in a novel low pressure flame. Applied Physics Letters, 1992, 60, 2695-2696.	1.5	12
66	Temporal and Spatial Evolution of the Thermal Structure of a Laser Spark in Air. , 2005, , .		12
67	Micro-alumina particle volatilization temperature measurements in a heterogeneous shock tube. Combustion and Flame, 2012, 159, 793-801.	2.8	12
68	Tungsten Combustion in Explosively Initiated W/Zr Mechanical Alloys. Journal of Energetic Materials, 2014, 32, 135-145.	1.0	12
69	Spectrally- and Temporally-Resolved Optical Depth Measurements in High Explosive Post-Detonation Fireballs. Propellants, Explosives, Pyrotechnics, 2020, 45, 406-415.	1.0	12
70	Quantitative absorption spectroscopy of laser-produced plasmas. Journal Physics D: Applied Physics, 2021, 54, 125201.	1.3	12
71	AlO VIBRATIONAL TEMPERATURE MEASUREMENTS FROM BURNING ALUMINUM PARTICLES AT ELEVATED PRESSURE. Combustion Science and Technology, 2001, 172, 97-107.	1.2	11
72	Modeling the Combustion of Nano-Sized Aluminum Particles. , 2006, , .		9

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73	Hydroxyl radical concentration measurements near the deposition substrate in low-pressure diamond-forming flames. <i>Combustion and Flame</i> , 2004, 138, 285-294.	2.8	8
74	Nano-Alumina Accommodation Coefficient Measurement Using Time-Resolved Laser-Induced Incandescence. <i>Journal of Heat Transfer</i> , 2016, 138, .	1.2	8
75	Simultaneous Imaging and Spectroscopy of Detonation Interaction in Reactive and Energetic Materials. <i>Applied Spectroscopy</i> , 2017, 71, 78-86.	1.2	8
76	Molecular Filtered Rayleigh Scattering applied to combustion and turbulence. , 1999, , .		7
77	Validation of Surface Chemistry Models Using Low Pressure Stagnation-Point Flames: Measurements of OH Above Platinum Surfaces. <i>Combustion Science and Technology</i> , 2000, 159, 147-168.	1.2	7
78	Laser-induced-fluorescence detection of SnO in low-pressure particle-synthesis flames. <i>Applied Physics B: Lasers and Optics</i> , 2003, 77, 455-461.	1.1	7
79	Shock Tube Measurements of Combustion of Nano-Aluminum. , 2006, , .		7
80	Aluminum nitride emission from a laser-induced plasma in a dispersed aerosol. <i>Journal of Applied Physics</i> , 2005, 98, 053301.	1.1	6
81	Optical Spectroscopy of Fireballs from Metallized Reactive Materials. , 2010, , .		6
82	Flow and Thermal Properties Induced by Electric Arc Plasma Actuators. , 2011, , .		6
83	High-Temperature Metal Oxide Spectral Emissivities for Pyrometry Applications. <i>Journal of Thermophysics and Heat Transfer</i> , 2015, 29, 874-879.	0.9	5
84	Diode laser monitoring of atomic iodine in explosive fireballs. <i>Measurement Science and Technology</i> , 2019, 30, 115501.	1.4	5
85	Particle size control during flat flame synthesis of nanophase oxide powders. <i>Scripta Materialia</i> , 1999, 12, 253-258.	0.5	4
86	Spectral Emission Signatures from Cased High-Explosive Charges. <i>Applied Spectroscopy</i> , 2021, 75, 1410-1418.	1.2	4
87	Diamond growth by methane injection into hydrogen-oxygen flames. <i>Diamond and Related Materials</i> , 1993, 2, 169-173.	1.8	3
88	Combustion of 5-micron Aluminum Particles in High Temperature, High Pressure, Water-Vapor Environments. , 2007, , .		3
89	Combustion of Aluminum Particles in the Transition Regime Between the Diffusion and Kinetic Limits. , 2008, , .		3
90	Experimental study of structure/behavior relationship for a metallized explosive. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	3

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91	Iodine Release by Combustion of Composite Mg <sup>TM</sup> Ca(IO <sub>3</sub> ) <sub>2</sub> Powder. Combustion Science and Technology, 2021, 193, 1042-1054.	1.2	3
92	Catalytic removal of NO from post-flame gases in low pressure stagnation-point flames over platinum. Combustion and Flame, 2001, 125, 931-941.	2.8	2
93	The Effects of Temperature Jump on CVD Modeling. Chemical Vapor Deposition, 2002, 8, 205-212.	1.4	2
94	Size Distribution Effects in Heterogeneous Shock Tube Burntime Experiments. , 2009, , .		2
95	Electrical Properties of Reversed-Polarity Ball Plasmoid Discharges. Plasma, 2020, 3, 92-102.	0.7	2
96	Ultraviolet Emissions from Explosive Detonation Breakout. Applied Spectroscopy, 2022, 76, 310-317.	1.2	2
97	<title>Optical detection of CH <sub>3</sub> during diamond chemical vapor deposition</title>. , 1994, 2124, 292.		1
98	Destruction of NO during Catalytic Combustion on Platinum and Palladium. Combustion Science and Technology, 2001, 165, 249-266.	1.2	1
99	The Combustion Characteristics of 10-Micron Aluminum Particles at Elevated Temperature and Pressure. , 2005, , .		1
100	The Emissivity of Micro- and Nano- Particles in Non-Reacting Environments. , 2009, , .		1
101	High-Spectral Resolution PLIF Imaging of Compressible Flows and Plasmas. , 2010, , .		1
102	Analysis of the requirements on modern energetics and their impact on materials design. AIP Conference Proceedings, 2012, , .	0.3	1
103	Modeling the ignition of a copper oxide aluminum thermite. AIP Conference Proceedings, 2017, , .	0.3	1
104	Temporally and Spatially Resolved Spectroscopic Measurements of Plasma Actuator Thermal Properties. , 2012, , .		1
105	Optical emissions from spherical charges. AIP Conference Proceedings, 2020, , .	0.3	1
106	A Review of the Spectroscopy of Gas-phase Flow: The Molecules and Modern Methods. , 2004, , .		0
107	The Presence of Gas Phase Species in Micro- and Nano-Aluminum Combustion. , 2009, , .		0
108	Quantitative Evidence of Reaction during Hypervelocity Penetration of Aluminum through Oxygenated Fluids. Procedia Engineering, 2013, 58, 157-166.	1.2	0

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109	Correlation Between Emission, Electric, and Flow Properties of Arc-Filament Plasma Actuators. AIAA Journal, 2013, 51, 922-935.	1.5	0
110	Temporally and Spatially Resolved Spectroscopic Measurements of Plasma-Actuator Thermal Properties. AIAA Journal, 2014, 52, 1802-1806.	1.5	0