Andrea D'Anna

List of Publications by Year
in descending order

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131 papers	4,151 citations	101543 36 h-index	149698 56 g-index
139 all docs	139 docs citations	139 times ranked	2422 citing authors

#	Article	IF	Citations
1	Thermo-optical-transmission OC/EC and Raman spectroscopy analyses of flame-generated carbonaceous nanoparticles. Fuel, 2022, 310, 122308.	6.4	5
2	Morphology and electronic properties of incipient soot by scanning tunneling microscopy and spectroscopy. Combustion and Flame, 2022, 243, 111980.	5.2	9
3	An Experimental Analysis of Five Household Equipment-Based Methods for Decontamination and Reuse of Surgical Masks. International Journal of Environmental Research and Public Health, 2022, 19, 3296.	2.6	8
4	Monitoring flame soot maturity by variable temperature Raman spectroscopy. Fuel, 2022, 321, 124006.	6.4	5
5	Radicals in nascent soot from laminar premixed ethylene and ehtylene-benzene flames by electron paramagnetic resonance spectroscopy. Proceedings of the Combustion Institute, 2021, 38, 1487-1495.	3.9	9
6	Electronic band gap of flame-formed carbon nanoparticles by scanning tunneling spectroscopy. Proceedings of the Combustion Institute, 2021, 38, 1805-1812.	3.9	18
7	Molecular content of nascent soot: Family characterization using two-step laser desorption laser ionization mass spectrometry. Proceedings of the Combustion Institute, 2021, 38, 1241-1248.	3.9	16
8	Soot particle size distribution measurements in a turbulent ethylene swirl flame. Proceedings of the Combustion Institute, 2021, 38, 2691-2699.	3.9	13
9	Mechanical Properties of Soot Particles: The Impact of Crosslinked Polycyclic Aromatic Hydrocarbons. Combustion Science and Technology, 2021, 193, 643-663.	2.3	14
10	Testing Surgical Face Masks in an Emergency Context: The Experience of Italian Laboratories during the COVID-19 Pandemic Crisis. International Journal of Environmental Research and Public Health, 2021, 18, 1462.	2.6	17
11	Soot-Free Low-NOx Aeronautical Combustor Concept: The Lean Azimuthal Flame for Kerosene Sprays. Energy & Fuels, 2021, 35, 7092-7106.	5.1	14
12	Nano-TiO2 Coating Layers with Improved Anticorrosive Properties by Aerosol Flame Synthesis and Thermophoretic Deposition on Aluminium Surfaces. Materials, 2021, 14, 2918.	2.9	5
13	Variable Temperature Synthesis of Tunable Flame-Generated Carbon Nanoparticles. Journal of Carbon Research, 2021, 7, 44.	2.7	2
14	Ï€-Diradical Aromatic Soot Precursors in Flames. Journal of the American Chemical Society, 2021, 143, 12212-12219.	13.7	41
15	Resistive Switching Phenomenon Observed in Self-Assembled Films of Flame-Formed Carbon-TiO2 Nanoparticles. Materials, 2021, 14, 4672.	2.9	1
16	Exploring Nanomechanical Properties of Soot Particle Layers by Atomic Force Microscopy Nanoindentation. Applied Sciences (Switzerland), 2021, 11, 8448.	2.5	2
17	A critical review of methods for decontaminating filtering facepiece respirators. Toxicology and Industrial Health, 2020, 36, 654-680.	1.4	7
18	A Review of Terminology Used to Describe Soot Formation and Evolution under Combustion and Pyrolytic Conditions. ACS Nano, 2020, 14, 12470-12490.	14.6	122

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19	On the effect of pressure on soot nanostructure: A Raman spectroscopy investigation. Combustion and Flame, 2020, 219, 13-19.	5.2	30
20	Evidence on the formation of dimers of polycyclic aromatic hydrocarbons in a laminar diffusion flame. Communications Chemistry, 2020, 3, .	4.5	33
21	Comprehensive soot particle size distribution modelling of a model Rich-Quench-Lean burner. Fuel, 2020, 270, 117483.	6.4	12
22	Soot inception: A DFT study of Ïƒ and Ï€ dimerization of resonantly stabilized aromatic radicals. Fuel, 2020, 279, 118491.	6.4	19
23	The role of CO2 dilution on soot formation and combustion characteristics in counter-flow diffusion flames of ethylene. Experimental Thermal and Fluid Science, 2020, 114, 110061.	2.7	8
24	Insights into incipient soot formation by atomic force microscopy. Proceedings of the Combustion Institute, 2019, 37, 885-892.	3.9	132
25	The Inhibition of Caspase-1- Does Not Revert Particulate Matter (PM)-Induced Lung Immunesuppression in Mice. Frontiers in Immunology, 2019, 10, 1329.	4.8	11
26	Flame-formed carbon nanoparticles exhibit quantum dot behaviors. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12692-12697.	7.1	48
27	Detailed kinetic mechanisms of PAH and soot formation. Computer Aided Chemical Engineering, 2019, , 647-672.	0.5	8
28	Soot inception in laminar coflow diffusion flames. Combustion and Flame, 2019, 205, 180-192.	5.2	27
29	Role of radicals in carbon clustering and soot inception: A combined EPR and Raman spectroscopic study. Combustion and Flame, 2019, 205, 286-294.	5.2	49
30	On the early stages of soot formation: Molecular structure elucidation by high-resolution atomic force microscopy. Combustion and Flame, 2019, 205, 154-164.	5.2	134
31	The effect of butanol isomers on the formation of carbon particulate matter in fuel-rich premixed ethylene flames. Combustion and Flame, 2019, 199, 122-130.	5.2	35
32	Particle formation in premixed ethylene-benzene flames: An experimental and modeling study. Combustion and Flame, 2019, 200, 23-31.	5.2	14
33	Filtration and coagulation efficiency of sub-10â€¯nm combustion-generated particles. Fuel, 2018, 221, 298-302.	6.4	14
34	Detailed modeling of soot particle formation and comparison to optical diagnostics and size distribution measurements in premixed flames using a method of moments. Fuel, 2018, 222, 287-293.	6.4	22
35	Experimental and numerical study of soot formation and evolution in co-flow laminar partially premixed flames. Fuel, 2018, 220, 396-402.	6.4	26
36	Probing the equivalence ratio in partially premixed flames by combining optical techniques and modeling results. Combustion Science and Technology, 2018, 190, 1442-1454.	2.3	1

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37	Structure and size of soot nanoparticles in laminar premixed flames at different equivalence ratios. Fuel, 2018, 216, 456-462.	6.4	20
38	TIO2 nanoparticle coatings with advanced antibacterial and hydrophilic properties prepared by flame aerosol synthesis and thermophoretic deposition. Surface and Coatings Technology, 2018, 349, 830-837.	4.8	28
39	Evidence of sub-10â€¯nm particles emitted from a small-size diesel engine. Experimental Thermal and Fluid Science, 2018, 95, 60-64.	2.7	15
40	COORDINATED MULTIPARAMETRIC CHARACTERIZATION OF ATMOSPHERIC PARTICULATE IN THE CAMPANIA REGION OF ITALY. , 2018, , .		1
41	Effect of C9H12 alkylbenzenes on particle formation in diffusion flames: An experimental study. Fuel, 2017, 191, 204-211.	6.4	24
42	Experimental Characterization and Modeling for Equivalence Ratio Sensing in Non-premixed Flames Using Chemiluminescence and Laser-Induced Breakdown Spectroscopy Techniques. Energy & Fuels, 2017, 31, 3227-3233.	5.1	13
43	Chemical Features of Particles Generated in an Ethylene/Ethanol Premixed Flame. Energy & Fuels, 2017, 31, 2370-2377.	5.1	19
44	Human peripheral blood mononuclear cells (PBMCs) from smokers release higher levels of IL-1-like cytokines after exposure to combustion-generated ultrafine particles. Scientific Reports, 2017, 7, 43016.	3.3	35
45	Towards Improving Simulations of Combustion Processes. Combustion Theory and Modelling, 2017, 21, 1-1.	1.9	4
46	Illuminating the earliest stages of the soot formation by photoemission and Raman spectroscopy. Combustion and Flame, 2017, 181, 188-197.	5.2	32
47	Electrical characterization of flame-soot nanoparticle thin films. Synthetic Metals, 2017, 229, 89-99.	3.9	13
48	Raman Spectroscopy of Soot Sampled in High-Pressure Diffusion Flames. Energy & Fuels, 2017, 31, 10158-10164.	5.1	30
49	Simulating the morphology of clusters of polycyclic aromatic hydrocarbons: The influence of the intermolecular potential. Combustion and Flame, 2017, 185, 53-62.	5.2	27
50	Antimicrobial Activity of TiO2 Coatings Prepared by Direct Thermophoretic Deposition of Flame-Synthesized Nanoparticles. MRS Advances, 2017, 2, 1493-1498.	0.9	4
51	Tracking the evolution of soot particles and precursors in turbulent flames using laser-induced emission. Proceedings of the Combustion Institute, 2017, 36, 1869-1876.	3.9	25
52	Molecular dynamics simulations of incipient carbonaceous nanoparticle formation at flame conditions. Combustion Theory and Modelling, 2017, 21, 49-61.	1.9	14
53	Effect of 2,5-dimethylfuran doping on particle size distributions measured in premixed ethylene/air flames. Proceedings of the Combustion Institute, 2017, 36, 985-992.	3.9	31
54	The evolution of soot particles in premixed and diffusion flames by thermophoretic particle densitometry. Proceedings of the Combustion Institute, 2017, 36, 763-770.	3.9	25

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55	Detailed particle nucleation modeling in a sooting ethylene flame using a Conditional Quadrature Method of Moments (CQMOM). Proceedings of the Combustion Institute, 2017, 36, 771-779.	3.9	18
56	Detection of nanostructures and soot in laminar premixed flames. Combustion and Flame, 2017, 176, 299-308.	5.2	49
57	Exploring Soot Particle Concentration and Emissivity by Transient Thermocouples Measurements in Laminar Partially Premixed Coflow Flames. Energies, 2017, 10, 232.	3.1	15
58	Pollutant Formation during the Occurrence of Flame Instabilities under Very-Lean Combustion Conditions in a Liquid-Fuel Burner. Energies, 2017, 10, 352.	3.1	16
59	Chronic Obstructive Pulmonary Disease-Derived Circulating Cells Release IL-18 and IL-33 under Ultrafine Particulate Matter Exposure in a Caspase-1/8-Independent Manner. Frontiers in Immunology, 2017, 8, 1415.	4.8	42
60	Effect of alkylated aromatics on particle formation in diffusion flames: An experimental study. Experimental Thermal and Fluid Science, 2016, 73, 27-32.	2.7	27
61	Effect of furanic biofuels on particles formation in premixed ethyleneâ€“air flames: An experimental study. Fuel, 2016, 175, 137-145.	6.4	27
62	Analysis of the chemical features of particles generated from ethylene and ethylene/2,5 dimethyl furan flames. Combustion and Flame, 2016, 167, 268-273.	5.2	36
63	Ninth Mediterranean Combustion Symposium. Combustion Science and Technology, 2016, 188, 481-481.	2.3	0
64	Temperature and oxygen effects on oxidation-induced fragmentation of soot particles. Combustion and Flame, 2016, 171, 15-26.	5.2	40
65	Nano-TiO2 coatings on aluminum surfaces by aerosol flame synthesis. Thin Solid Films, 2016, 609, 53-61.	1.8	12
66	On the hydrophilic/hydrophobic character of carbonaceous nanoparticles formed in laminar premixed flames. Experimental Thermal and Fluid Science, 2016, 73, 56-63.	2.7	23
67	Spectroscopic Characterization of Flame-Generated 2-D Carbon Nano-Disks. Materials Research Society Symposia Proceedings, 2015, 1726, 56.	0.1	0
68	â€œAre we forgetting the smallest, sub 10 nm combustion generated particles?â€• Particle and Fibre Toxicology, 2015, 12, 34.	6.2	53
69	Flame-Formed Carbon Nanoparticles: Morphology, Interaction Forces, and Hamaker Constant from AFM. Aerosol Science and Technology, 2015, 49, 281-289.	3.1	34
70	Further experimental and modelling evidences of soot fragmentation in flames. Proceedings of the Combustion Institute, 2015, 35, 1779-1786.	3.9	37
71	Further details on particle inception and growth in premixed flames. Proceedings of the Combustion Institute, 2015, 35, 1795-1802.	3.9	43
72	Effect of furans on particle formation in diffusion flames: An experimental and modeling study. Proceedings of the Combustion Institute, 2015, 35, 525-532.	3.9	48

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73	Carbon-TiO2 Nanostructures: Flame Synthesis and Characterization. Materials Research Society Symposia Proceedings, 2015, 1747, 1.	0.1	1
74	Physicochemical evolution of nascent soot particles in a laminar premixed flame: from nucleation to early growth. Combustion and Flame, 2015, 162, 3854-3863.	5.2	80
75	Organic nanoparticles from different fuel blends: <i>in vitro</i> toxicity and inflammatory potential. Journal of Applied Toxicology, 2014, 34, 1247-1255.	2.8	13
76	Eighth Mediterranean Combustion Symposium. Combustion Science and Technology, 2014, 186, 387-388.	2.3	0
77	Eighth Mediterranean Combustion Symposium. Experimental Thermal and Fluid Science, 2014, 56, 1.	2.7	0
78	Optical and electrical characterization of carbon nanoparticles produced in laminar premixed flames. Combustion and Flame, 2014, 161, 3201-3210.	5.2	33
79	The role of dimethyl ether as substituent to ethylene on particulate formation in premixed and counter-flow diffusion flames. Fuel, 2014, 126, 256-262.	6.4	48
80	Characterization of flame-generated 2-D carbon nano-disks. Carbon, 2014, 68, 138-148.	10.3	59
81	Coagulation of combustion generated nanoparticles in low and intermediate temperature regimes: An experimental study. Proceedings of the Combustion Institute, 2013, 34, 1877-1884.	3.9	43
82	Apoptotic and proinflammatory effect of combustion-generated organic nanoparticles in endothelial cells. Toxicology Letters, 2013, 219, 307-314.	0.8	25
83	Modeling Formation and Oxidation of Soot in Nonpremixed Flames. Energy & Fuels, 2013, 27, 2303-2315.	5.1	88
84	Characterization of Combustion-Generated Carbonaceous Nanoparticles by Size-Dependent Ultraviolet Laser Photoionization. Journal of Physical Chemistry A, 2013, 117, 3980-3989.	2.5	19
85	Flame synthesis of MgO nanoparticles in a FASP Reactor. Materials Research Society Symposia Proceedings, 2013, 1506, 1.	0.1	2
86	An Advanced Multi-Sectional Method for Particulate Matter Modeling in Flames. Green Energy and Technology, 2013, , 363-388.	0.6	3
87	Metal oxide nanoparticles formed from solution droplets under high heating rate. Experimental Thermal and Fluid Science, 2012, 43, 23-31.	2.7	1
88	Effect of Sampling Probe Perturbation on Particle Size Distribution Functions in a Slightly Sooting Premixed Flame of Ethylene: A Modeling Study. Combustion Science and Technology, 2012, 184, 1011-1024.	2.3	3
89	The effect of ethanol on the particle size distributions in ethylene premixed flames. Experimental Thermal and Fluid Science, 2012, 43, 71-75.	2.7	51
90	Particulate Formation in Premixed and Counter-flow Diffusion Ethylene/Ethanol Flames. Energy & Fuels, 2012, 26, 6144-6152.	5.1	69

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91	Detection of aromatic hydrocarbons and incipient particles in an opposed-flow flame of ethylene by spectral and time-resolved laser induced emission spectroscopy. Combustion and Flame, 2012, 159, 1663-1669.	5.2	53
92	Investigating the origin of nuclei particles in GDI engine exhausts. Combustion and Flame, 2012, 159, 1687-1692.	5.2	72
93	On the characterization of nanoparticles emitted from combustion sources related to understanding their effects on health and climate. Journal of Hazardous Materials, 2012, 211-212, 420-426.	12.4	14
94	Evolution of soot size distribution in premixed ethylene/air and ethylene/benzene/air flames: Experimental and modeling study. Combustion and Flame, 2011, 158, 98-104.	5.2	33
95	Charge fraction distribution of nucleation mode particles: New insight on the particle formation mechanism. Combustion and Flame, 2011, 158, 1418-1425.	5.2	26
96	A flat premixed flame reactor to study nano-ash formation during high temperature pulverized coal combustion and oxygen firing. Fuel, 2011, 90, 369-375.	6.4	12
97	Experimental and modeling study on the molecular weight distribution and properties of carbon particles in premixed sooting flames. Proceedings of the Combustion Institute, 2011, 33, 633-640.	3.9	31
98	Size Distribution Functions of Ultrafine Ashes From Pulverized Coal Combustion. Combustion Science and Technology, 2010, 182, 668-682.	2.3	5
99	A Comprehensive Kinetic Modeling of Ignition of Syngasâ€“Air Mixtures at Low Temperatures and High Pressures. Combustion Science and Technology, 2010, 182, 692-701.	2.3	14
100	A model of particle nucleation in premixed ethylene flames. Combustion and Flame, 2010, 157, 2106-2115.	5.2	69
101	Measurements of ultrafine particles from a gas-turbine burning biofuels. Experimental Thermal and Fluid Science, 2010, 34, 258-261.	2.7	11
102	Detailed modeling of size distribution functions and hydrogen content in combustion-formed particles. Combustion and Flame, 2010, 157, 1211-1219.	5.2	49
103	Multimodal ultrafine particles from pulverized coal combustion in a laboratory scale reactor. Combustion and Flame, 2010, 157, 1290-1297.	5.2	12
104	Charge Distribution of Incipient Flame-Generated Particles. Aerosol Science and Technology, 2010, 44, 651-662.	3.1	23
105	Factors Influencing Ultrafine Particulate Matter (PM_{0.1}) Formation under Pulverized Coal Combustion and Oxyfiring Conditions. Energy & Fuels, 2010, 24, 6248-6256.	5.1	24
106	Modeling and measurements of size distributions in premixed ethylene and benzene flames. Proceedings of the Combustion Institute, 2009, 32, 705-711.	3.9	37
107	Particle formation in opposed-flow diffusion flames of ethylene: An experimental and numerical study. Proceedings of the Combustion Institute, 2009, 32, 793-801.	3.9	39
108	Combustion-formed nanoparticles. Proceedings of the Combustion Institute, 2009, 32, 593-613.	3.9	308

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109	Effect of fuel/air ratio and aromaticity on the molecular weight distribution of soot in premixed n-heptane flames. Proceedings of the Combustion Institute, 2009, 32, 803-810.	3.9	45
110	On detection of nanoparticles below the sooting threshold. Combustion and Flame, 2008, 152, 287-292.	5.2	40
111	<i>Report:</i> Combustion Byproducts and Their Health Effects: Summary of the 10th International Congress. Environmental Engineering Science, 2008, 25, 1107-1114.	1.6	24
112	An Experimental and Modelling Study of Particulate Formation in Premixed Flames Burning Methane. Combustion Science and Technology, 2008, 180, 950-958.	2.3	6
113	Measurements of Nanoparticles of Organic Carbon and Soot in Flames and Vehicle Exhausts. Environmental Science & Technology, 2008, 42, 859-863.	10.0	49
114	Detailed Kinetic Modeling of Particulate Formation in Rich Premixed Flames of Ethylene. Energy & Fuels, 2008, 22, 1610-1619.	5.1	37
115	Particle Inception in a Laminar Premixed Flame of Benzene. Combustion Science and Technology, 2008, 180, 758-766.	2.3	8
116	Ultrafine Particles Formed by Heating Droplets of Simulated Ash Containing Metals. Environmental Engineering Science, 2008, 25, 1379-1388.	1.6	10
117	Emission of Ultrafine Particles from Natural Gas Domestic Burners. Environmental Engineering Science, 2008, 25, 1357-1364.	1.6	24
118	SOOT AND NANOPARTICLE FORMATION IN LAMINAR AND TURBULENT FLAMES. Combustion Science and Technology, 2007, 179, 387-400.	2.3	21
119	INVESTIGATION OF SPECIES CONCENTRATION AND SOOT FORMATION IN A CO-FLOWING DIFFUSION FLAME OF ETHYLENE. Combustion Science and Technology, 2007, 179, 355-369.	2.3	19
120	Nano organic carbon and soot in turbulent non-premixed ethylene flames. Proceedings of the Combustion Institute, 2007, 31, 621-629.	3.9	37
121	Surface deposition and coagulation efficiency of combustion generated nanoparticles in the size range from 1 to 10nm. Proceedings of the Combustion Institute, 2005, 30, 2595-2603.	3.9	132
122	Aromatic formation pathways in non-premixed methane flames. Combustion and Flame, 2003, 132, 715-722.	5.2	58
123	Modeling aerosol formation in opposed-flow diffusion flames. Chemosphere, 2003, 51, 1047-1054.	8.2	22
124	Spectroscopic analysis and modeling of particulate formation in a diesel engine. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 73, 443-450.	2.3	16
125	A modeling evaluation of the effect of chlorine on the formation of particulate matter in combustion. Chemosphere, 2001, 42, 463-471.	8.2	23
126	Modeling of particulate formation in combustion and pyrolysis. Chemical Engineering Science, 1999, 54, 3433-3442.	3.8	75

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127	UV-Broadband Light Scattering Measurements During Metallic Particle Formation in a Combustion-Like Environment. Particle and Particle Systems Characterization, 1999, 16, 77-84.	2.3	3
128	Controlling Steps in the Low-Temperature Oxidation of n-Heptane and iso-Octane. Combustion and Flame, 1998, 112, 617-622.	5.2	44
129	A kinetic model for the formation of aromatic hydrocarbons in premixed laminar flames. Proceedings of the Combustion Institute, 1998, 27, 425-433.	0.3	118
130	A wide-range modeling study of iso-octane oxidation. Combustion and Flame, 1997, 108, 24-42.	5.2	133
131	Spectroscopic and Chemical Characterization of Soot Inception Processes in Premixed Laminar Flames at Atmospheric Pressure. Springer Series in Chemical Physics, 1994, , 83-103.	0.2	23