

Alison S Tomlin

List of Publications by Year in descending order

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110
papers

3,772
citations

109321

35
h-index

149698

56
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115
all docs

115
docs citations

115
times ranked

3171
citing authors

#	ARTICLE	IF	CITATIONS
1	An experimental and kinetic modeling study of the ignition delay and heat release characteristics of a five component gasoline surrogate and its blends with iso-butanol within a rapid compression machine. <i>International Journal of Chemical Kinetics</i> , 2021, 53, 787-808.	1.6	12
2	Auto-ignition and detonation of n-butanol and toluene reference fuel blends (TRF). <i>Combustion and Flame</i> , 2021, 229, 111378.	5.2	16
3	Air Quality and Climate Impacts of Biomass Use as an Energy Source: A Review. <i>Energy & Fuels</i> , 2021, 35, 14213-14240.	5.1	27
4	Influence of Iso-Butanol Blending with a Reference Gasoline and Its Surrogate on Spark-Ignition Engine Performance. <i>Energy & Fuels</i> , 2021, 35, 19665-19688.	5.1	9
5	Evolution of particle interactions between accidentally released aerosol particles generated from powdered engineered nanomaterials into a simulated workplace atmosphere. <i>Journal of Aerosol Science</i> , 2019, 129, 98-115.	3.8	2
6	Evacuation characteristics of released airborne TiO ₂ nanomaterial particles under different ventilation rates in a confined environment. <i>Journal of Environmental Management</i> , 2019, 233, 417-426.	7.8	1
7	Experimental and modelling study of the impacts of n-butanol blending on the auto-ignition behaviour of gasoline and its surrogate at low temperatures. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 501-509.	3.9	21
8	Improved near surface wind speed predictions using Gaussian process regression combined with numerical weather predictions and observed meteorological data. <i>Renewable Energy</i> , 2018, 126, 1043-1054.	8.9	120
9	Investigation of the effect of correlated uncertain rate parameters via the calculation of global and local sensitivity indices. <i>Journal of Mathematical Chemistry</i> , 2018, 56, 864-889.	1.5	6
10	Chemical Kinetic Modeling Study on the Influence of n-Butanol Blending on the Combustion, Autoignition, and Knock Properties of Gasoline and Its Surrogate in a Spark-Ignition Engine. <i>Energy & Fuels</i> , 2018, 32, 10065-10077.	5.1	5
11	Experimental Study on the Influence of n-Butanol Blending on the Combustion, Autoignition, and Knock Properties of Gasoline and Its Surrogate in a Spark-Ignition Engine. <i>Energy & Fuels</i> , 2018, 32, 10052-10064.	5.1	7
12	Low temperature oxidation of n-butanol: Key uncertainties and constraints in kinetics. <i>Fuel</i> , 2017, 207, 776-789.	6.4	9
13	The influence of n-butanol blending on the ignition delay times of gasoline and its surrogate at high pressures. <i>Fuel</i> , 2017, 187, 211-219.	6.4	30
14	Timescales of mixing and of chemistry: general discussion. <i>Faraday Discussions</i> , 2016, 189, 253-276.	3.2	0
15	A method for mapping the turbulence intensity and excess energy available to building mounted wind turbines over a UK City. <i>Wind Energy</i> , 2016, 19, 1423-1438.	4.2	4
16	Chemical complexity of the urban atmosphere and its consequences: general discussion. <i>Faraday Discussions</i> , 2016, 189, 137-167.	3.2	1
17	Numerical modelling strategies for the urban atmosphere: general discussion. <i>Faraday Discussions</i> , 2016, 189, 635-660.	3.2	0
18	Urban case studies: general discussion. <i>Faraday Discussions</i> , 2016, 189, 473-514.	3.2	1

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19	The treatment of uncertainties in reactive pollution dispersion models at urban scales. <i>Faraday Discussions</i> , 2016, 189, 567-587.	3.2	2
20	Methodologies for city-scale assessment of renewable energy generation potential to inform strategic energy infrastructure investment. <i>Cities</i> , 2016, 54, 45-56.	5.6	41
21	Global Uncertainty Propagation and Sensitivity Analysis in the CH ₃ OCH ₂ + O ₂ System: Combining Experiment and Theory To Constrain Key Rate Coefficients in DME Combustion. <i>Journal of Physical Chemistry A</i> , 2015, 119, 7430-7438.	2.5	27
22	Long-term wind resource assessment for small and medium-scale turbines using operational forecast data and measure- <i>correlate</i> - <i>predict</i> . <i>Renewable Energy</i> , 2015, 81, 760-769.	8.9	23
23	Urban wind: Characterisation of useful gust and energy capture. <i>Renewable Energy</i> , 2015, 81, 162-172.	8.9	42
24	Determining predictive uncertainties and global sensitivities for large parameter systems: A case study for n-butane oxidation. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 607-616.	3.9	31
25	Modelling of roof geometries from low-resolution LiDAR data for city-scale solar energy applications using a neighbouring buildings method. <i>Applied Energy</i> , 2015, 148, 93-104.	10.1	50
26	Reduction of Reaction Mechanisms. , 2014, , 183-312.		6
27	Sensitivity and Uncertainty Analyses. , 2014, , 61-144.		1
28	Analysis of Kinetic Reaction Mechanisms. , 2014, , .		128
29	An overview of the potential environmental impacts of large-scale microalgae cultivation. <i>Biofuels</i> , 2014, 5, 331-349.	2.4	100
30	Evaluation of Combustion Mechanisms Using Global Uncertainty and Sensitivity Analyses: A Case Study for Low-Temperature Dimethyl Ether Oxidation. <i>International Journal of Chemical Kinetics</i> , 2014, 46, 662-682.	1.6	43
31	Low-cost wind resource assessment for small-scale turbine installations using site pre-screening and short-term wind measurements. <i>IET Renewable Power Generation</i> , 2014, 8, 349-358.	3.1	13
32	Methodology for the assessment of PV capacity over a city region using low-resolution LiDAR data and application to the City of Leeds (UK). <i>Applied Energy</i> , 2014, 124, 28-34.	10.1	42
33	Data efficient measure-correlate-predict approaches to wind resource assessment for small-scale wind energy. <i>Renewable Energy</i> , 2014, 63, 162-171.	8.9	27
34	Comparison between the bivariate Weibull probability approach and linear regression for assessment of the long-term wind energy resource using MCP. <i>Renewable Energy</i> , 2014, 68, 529-539.	8.9	16
35	Aerodynamic Parameters of a UK City Derived from Morphological Data. <i>Boundary-Layer Meteorology</i> , 2013, 146, 447-468.	2.3	25
36	Assessing the potential of urban wind energy in a major UK city using an analytical model. <i>Renewable Energy</i> , 2013, 60, 701-710.	8.9	50

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37	Evaluation of a semi-empirical model for predicting the wind energy resource relevant to small-scale wind turbines. <i>Renewable Energy</i> , 2013, 50, 280-288.	8.9	24
38	Uncertainty propagation in the derivation of phenomenological rate coefficients from theory: A case study of n-propyl radical oxidation. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 177-185.	3.9	64
39	Mapping the wind resource over UK cities. <i>Renewable Energy</i> , 2013, 55, 202-211.	8.9	26
40	The role of sensitivity and uncertainty analysis in combustion modelling. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 159-176.	3.9	111
41	Investigation and Improvement of Reaction Mechanisms Using Sensitivity Analysis and Optimization. <i>Green Energy and Technology</i> , 2013, , 411-445.	0.6	13
42	Mechanism Reduction to Skeletal Form and Species Lumping. <i>Green Energy and Technology</i> , 2013, , 447-466.	0.6	8
43	Time-Scale Splitting-Based Mechanism Reduction. <i>Green Energy and Technology</i> , 2013, , 467-484.	0.6	18
44	Improvement of the Modeling of the Low-Temperature Oxidation of <i>n</i> -Butane: Study of the Primary Reactions. <i>Journal of Physical Chemistry A</i> , 2012, 116, 6142-6158.	2.5	72
45	The predictability of above roof wind resource in the urban roughness sublayer. <i>Wind Energy</i> , 2012, 15, 225-243.	4.2	34
46	Global Sensitivity Analysis of Chemical-Kinetic Reaction Mechanisms: Construction and Deconstruction of the Probability Density Function. <i>Journal of Physical Chemistry A</i> , 2011, 115, 1556-1578.	2.5	46
47	The Use of Global Sensitivity Methods for the Analysis, Evaluation and Improvement of Complex Modelling Systems. <i>Lecture Notes in Computational Science and Engineering</i> , 2011, , 9-36.	0.3	10
48	Estimating Aerodynamic Parameters of Urban-Like Surfaces with Heterogeneous Building Heights. <i>Boundary-Layer Meteorology</i> , 2011, 141, 443-465.	2.3	68
49	Uncertainty driven theoretical kinetics studies for CH ₃ OH ignition: HO ₂ +CH ₃ OH and O ₂ +CH ₃ OH. <i>Proceedings of the Combustion Institute</i> , 2011, 33, 351-357.	3.9	149
50	In-Street Wind Direction Variability in the Vicinity of a Busy Intersection in Central London. <i>Boundary-Layer Meteorology</i> , 2010, 136, 489-513.	2.3	37
51	Urban tracer dispersion experiment in London (DAPPLE) 2003: field study and comparison with empirical prediction. <i>Atmospheric Science Letters</i> , 2010, 11, 241-248.	1.9	24
52	Theoretical Validation of Chemical Kinetic Mechanisms: Combustion of Methanol. <i>Journal of Physical Chemistry A</i> , 2010, 114, 8286-8301.	2.5	66
53	A field study of factors influencing the concentrations of a traffic-related pollutant in the vicinity of a complex urban junction. <i>Atmospheric Environment</i> , 2009, 43, 5027-5037.	4.1	38
54	The effects of parametric uncertainties in simulations of a reactive plume using a Lagrangian stochastic model. <i>Atmospheric Environment</i> , 2009, 43, 5978-5988.	4.1	9

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55	Short-range urban dispersion experiments using fixed and moving sources. <i>Atmospheric Science Letters</i> , 2009, 10, 59-65.	1.9	20
56	The application of the QSSA via reaction lumping for the reduction of complex hydrocarbon oxidation mechanisms. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 543-551.	3.9	33
57	GUI "HDMR" A software tool for global sensitivity analysis of complex models. <i>Environmental Modelling and Software</i> , 2009, 24, 775-785.	4.5	194
58	A global sensitivity study of cyclohexane oxidation under low temperature fuel-rich conditions using HDMR methods. <i>Combustion Theory and Modelling</i> , 2009, 13, 589-605.	1.9	47
59	High temporal resolution measurements of roadside particle size distributions and their implications for exposure. <i>Journal of Physics: Conference Series</i> , 2009, 151, 012025.	0.4	0
60	Modelling photochemical air pollutant formation in Hungary using an adaptive grid technique. <i>International Journal of Environment and Pollution</i> , 2009, 36, 44.	0.2	11
61	Effect of the soil wetness state on the stomatal ozone fluxes over Hungary. <i>International Journal of Environment and Pollution</i> , 2009, 36, 180.	0.2	6
62	Dispersion Experiments in Central London: The 2007 DAPPLE project. <i>Bulletin of the American Meteorological Society</i> , 2009, 90, 955-970.	3.3	90
63	The influence of background wind direction on the roadside turbulent velocity field within a complex urban street. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2008, 134, 1371-1384.	2.7	7
64	A global sensitivity study of sulfur chemistry in a premixed methane flame model using HDMR. <i>International Journal of Chemical Kinetics</i> , 2008, 40, 742-753.	1.6	108
65	Global sensitivity analysis of a 3D street canyon model "Part I: The development of high dimensional model representations. <i>Atmospheric Environment</i> , 2008, 42, 1857-1873.	4.1	56
66	Global sensitivity analysis of a 3D street canyon model "Part II: Application and physical insight using sensitivity analysis. <i>Atmospheric Environment</i> , 2008, 42, 1874-1891.	4.1	13
67	Suppression of nucleation mode particles by biomass burning in an urban environment: a case study. <i>Journal of Environmental Monitoring</i> , 2008, 10, 979.	2.1	18
68	Spatial Dynamics of Steady Flames 1. Phase Space Structure and the Dynamics of Individual Trajectories. <i>Journal of Physical Chemistry A</i> , 2008, 112, 7768-7783.	2.5	6
69	Spatial Dynamics of Steady Flames 2. Low-Dimensional Manifolds and the Role of Transport Processes. <i>Journal of Physical Chemistry A</i> , 2008, 112, 7784-7805.	2.5	5
70	Factors influencing particle number concentrations, size distributions and modal parameters at a roof-level and roadside site in Leicester, UK. <i>Science of the Total Environment</i> , 2007, 386, 65-82.	8.0	36
71	Evaluation of models for the low temperature combustion of alkanes through interpretation of pressure-temperature ignition diagrams. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 3197-3210.	2.8	32
72	Observations of urban airborne particle number concentrations during rush-hour conditions: analysis of the number based size distributions and modal parameters. <i>Journal of Environmental Monitoring</i> , 2006, 8, 1203.	2.1	34

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73	The use of global uncertainty methods for the evaluation of combustion mechanisms. Reliability Engineering and System Safety, 2006, 91, 1219-1231.	8.9	51
74	A polynomial repro-model applied to propane cracking. Computer Aided Chemical Engineering, 2005, 20, 373-378.	0.5	1
75	The spatial variability in concentrations of a traffic-related pollutant in two street canyons in York, UK – Part II: The influence of traffic characteristics. Atmospheric Environment, 2005, 39, 3163-3176.	4.1	27
76	Genotoxicity of size-fractionated samples of urban particulate matter. Environmental and Molecular Mutagenesis, 2005, 45, 380-387.	2.2	29
77	Introduction to the DAPPLE Air Pollution Project. Science of the Total Environment, 2004, 332, 139-153.	8.0	107
78	Modelling ozone fluxes over Hungary. Atmospheric Environment, 2004, 38, 6211-6222.	4.1	19
79	Simulation of the dispersion of nuclear contamination using an adaptive Eulerian grid model. Journal of Environmental Radioactivity, 2004, 75, 59-82.	1.7	32
80	Systematic reduction of complex tropospheric chemical mechanisms, Part I: sensitivity and time-scale analyses. Atmospheric Chemistry and Physics, 2004, 4, 2025-2056.	4.9	47
81	Atmospheric lifetime as a probe of radical chemistry in the boundary layer. Atmospheric Environment, 2003, 37, 2193-2205.	4.1	10
82	Reduction of a chemical kinetic scheme for carbon monoxide-hydrogen oxidation. Computer Aided Chemical Engineering, 2003, 14, 581-586.	0.5	0
83	Low-dimensional manifolds in tropospheric chemical systems. Faraday Discussions, 2002, 120, 125-146.	3.2	21
84	The Estimation of Intrinsic Low Dimensional Manifold Dimension in Atmospheric Chemical Reaction Systems. , 2002, , 245-263.		1
85	Modelling Photochemical Air Pollution in Hungary Using an Adaptive Grid Model. , 2002, , 264-273.		2
86	Resolution of Pollutant Concentrations Using a Fully 3D Adaptive Method. The IMA Volumes in Mathematics and Its Applications, 2002, , 61-79.	0.5	0
87	Experimental and modelling study of sulfur and nitrogen doped premixed methane flames at low pressure. Faraday Discussions, 2001, 119, 337-352.	3.2	41
88	An investigation of important gas-phase reactions of nitrogenous species from the simulation of experimental measurements in combustion systems. Combustion and Flame, 2001, 124, 573-589.	5.2	57
89	The Simulation of Photochemical Smog Episodes in Hungary and Central Europe Using Adaptive Gridding Models. Lecture Notes in Computer Science, 2001, , 67-76.	1.3	5
90	3-D Multi-scale air pollution modelling using adaptive unstructured meshes. Environmental Modelling and Software, 2000, 15, 681-692.	4.5	12

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91	The application of repro-modelling to a tropospheric chemical model. <i>Environmental Modelling and Software</i> , 2000, 15, 611-618.	4.5	8
92	Low-dimensional manifolds and reduced chemical models for tropospheric chemistry simulations. <i>Atmospheric Environment</i> , 2000, 34, 2425-2436.	4.1	29
93	3D adaptive unstructured meshes for air pollution modelling. <i>Management of Environmental Quality</i> , 1999, 10, 267-275.	0.4	7
94	The Use of 3-D Adaptive Unstructured Meshes in Air Pollution Modelling. , 1999, , 339-348.		3
95	Multi-scale Atmospheric Dispersion Modelling by Use of Adaptive Gridding Techniques. <i>Environmental Monitoring and Assessment</i> , 1998, 52, 225-238.	2.7	15
96	Mechanism reduction techniques applied to tropospheric chemistry. <i>Atmospheric Environment</i> , 1998, 32, 1059-1073.	4.1	40
97	Chapter 4 Mathematical tools for the construction, investigation and reduction of combustion mechanisms. <i>Comprehensive Chemical Kinetics</i> , 1997, , 293-437.	2.3	173
98	The use of algebraic sets in the approximation of inertial manifolds and lumping in chemical kinetic systems. <i>Physica D: Nonlinear Phenomena</i> , 1995, 83, 421-449.	2.8	35
99	Reduced Mechanisms for Propane Pyrolysis. <i>Industrial & Engineering Chemistry Research</i> , 1995, 34, 3749-3760.	3.7	48
100	A general analysis of approximate nonlinear lumping in chemical kinetics. II. Constrained lumping. <i>Journal of Chemical Physics</i> , 1994, 101, 1188-1201.	3.0	43
101	A general analysis of approximate nonlinear lumping in chemical kinetics. I. Unconstrained lumping. <i>Journal of Chemical Physics</i> , 1994, 101, 1172-1187.	3.0	44
102	From feedback to chaos in chemical systems. <i>Analytical Proceedings</i> , 1993, 30, 307.	0.4	7
103	On the error of the quasi-steady-state approximation. <i>The Journal of Physical Chemistry</i> , 1993, 97, 163-172.	2.9	162
104	Determination of approximate lumping schemes by a singular perturbation method. <i>Journal of Chemical Physics</i> , 1993, 99, 3562-3574.	3.0	33
105	Mechanism reduction for the oscillatory oxidation of hydrogen: Sensitivity and quasi-steady-state analyses. <i>Combustion and Flame</i> , 1992, 91, 107-130.	5.2	131
106	Modelling complex oscillations for the H ₂ + O ₂ reaction in an open system. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1991, 87, 2539.	1.7	21
107	Development of oscillations in closed systems. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1990, 86, 3365.	1.7	6
108	Quadratic autocatalysis in a non-isothermal CSTR. <i>Chemical Engineering Science</i> , 1989, 44, 1129-1137.	3.8	15

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109	Evaluation of the Effect of Fuel Properties on the Fuel Spray and Jet Characteristics in a HGV DI Diesel Engine Operated by Used Cooking Oils. Applied Mechanics and Materials, 0, 694, 3-12.	0.2	3
110	Emissions from a HGV Using Used Cooking Oil as a Fuel under Real World Driving Conditions. , 0, , .		2