

Roda Bounaceur

List of Publications by Year in descending order

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79
papers

3,639
citations

147566

31
h-index

133063

59
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81
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81
docs citations

81
times ranked

3277
citing authors

#	ARTICLE	IF	CITATIONS
1	Progress toward a unified detailed kinetic model for the autoignition of alkanes from C4 to C10 between 600 and 1200 K. <i>Combustion and Flame</i> , 2005, 142, 170-186.	2.8	272
2	Membrane processes for post-combustion carbon dioxide capture: A parametric study. <i>Energy</i> , 2006, 31, 2556-2570.	4.5	260
3	Laminar burning velocity of gasolines with addition of ethanol. <i>Fuel</i> , 2014, 115, 162-169.	3.4	248
4	Measurements of Laminar Flame Velocity for Components of Natural Gas. <i>Energy & Fuels</i> , 2011, 25, 3875-3884.	2.5	181
5	A chemical model for the atmosphere of hot Jupiters. <i>Astronomy and Astrophysics</i> , 2012, 546, A43.	2.1	181
6	Experimental and modeling study of the oxidation of toluene. <i>International Journal of Chemical Kinetics</i> , 2005, 37, 25-49.	1.0	176
7	Experimental and modelling investigation of the thermal decomposition of n-dodecane. <i>Journal of Analytical and Applied Pyrolysis</i> , 2004, 71, 865-881.	2.6	118
8	Towards cleaner combustion engines through groundbreaking detailed chemical kinetic models. <i>Chemical Society Reviews</i> , 2011, 40, 4762.	18.7	111
9	Biogas, membranes and carbon dioxide capture. <i>Journal of Membrane Science</i> , 2009, 328, 11-14.	4.1	106
10	Adiabatic flame temperature from biofuels and fossil fuels and derived effect on NOx emissions. <i>Fuel Processing Technology</i> , 2010, 91, 229-235.	3.7	104
11	Experimental and modeling study of the oxidation of xylenes. <i>International Journal of Chemical Kinetics</i> , 2006, 38, 284-302.	1.0	88
12	Experimental and Modeling Investigation of the Low-Temperature Oxidation of Dimethyl Ether. <i>Journal of Physical Chemistry A</i> , 2015, 119, 7905-7923.	1.1	85
13	Primary Mechanism of the Thermal Decomposition of Tricyclodecane. <i>Journal of Physical Chemistry A</i> , 2006, 110, 11298-11314.	1.1	82
14	A hybrid process combining oxygen enriched air combustion and membrane separation for post-combustion carbon dioxide capture. <i>Separation and Purification Technology</i> , 2009, 68, 30-36.	3.9	70
15	An experimental and kinetic modeling study of the autoignition of 1-methylnaphthalene/air and 2-methylnaphthalene/n-decane/air mixtures at elevated pressures. <i>Combustion and Flame</i> , 2010, 157, 1976-1988.	2.8	67
16	Influence of the position of the double bond on the autoignition of linear alkenes at low temperature. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 387-394.	2.4	66
17	New chemical scheme for studying carbon-rich exoplanet atmospheres. <i>Astronomy and Astrophysics</i> , 2015, 577, A33.	2.1	64
18	Modeling of autoignition and NO sensitization for the oxidation of IC engine surrogate fuels. <i>Combustion and Flame</i> , 2009, 156, 505-521.	2.8	61

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19	Experimental and modeling study of the oxidation of n-butylbenzene. <i>Combustion and Flame</i> , 2012, 159, 1399-1416.	2.8	59
20	New insights into secondary gas generation from the thermal cracking of oil: Methylated monoaromatics. A kinetic approach using 1,2,4-trimethylbenzene. Part I: A mechanistic kinetic model. <i>Organic Geochemistry</i> , 2010, 41, 146-167.	0.9	57
21	Intramolecular effects on the kinetics of unimolecular reactions of \hat{P}^2 -HOROÖ™ and HOQÖ™OOH radicals. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 12231-12251.	1.3	57
22	Modelling intra-particle phenomena of biomass pyrolysis. <i>Chemical Engineering Research and Design</i> , 2011, 89, 2136-2146.	2.7	56
23	Up to what temperature is petroleum stable? New insights from a 5200 free radical reactions model. <i>Organic Geochemistry</i> , 2002, 33, 1487-1499.	0.9	54
24	Modeling of hydrocarbons pyrolysis at low temperature. Automatic generation of free radicals mechanisms. <i>Journal of Analytical and Applied Pyrolysis</i> , 2002, 64, 103-122.	2.6	51
25	Rigorous variable permeability modelling and process simulation for the design of polymeric membrane gas separation units: MEMSiC simulation tool. <i>Journal of Membrane Science</i> , 2017, 523, 77-91.	4.1	50
26	Measurements of Laminar Burning Velocities above Atmospheric Pressure Using the Heat Flux Methodâ€”Application to the Case of <i>n</i> -Pentane. <i>Energy & Fuels</i> , 2015, 29, 398-404.	2.5	49
27	Experimental and modeling study of burning velocities for alkyl aromatic components relevant to diesel fuels. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 341-348.	2.4	43
28	Mechanistic Modeling of the Thermal Cracking of Tetralin. <i>Industrial & Engineering Chemistry Research</i> , 2000, 39, 4152-4165.	1.8	42
29	The oxidation of large alkylbenzenes: An experimental and modeling study. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 349-356.	2.4	34
30	New chemical scheme for giant planet thermochemistry. <i>Astronomy and Astrophysics</i> , 2020, 634, A78.	2.1	34
31	Oxidation of small unsaturated methyl and ethyl esters. <i>International Journal of Chemical Kinetics</i> , 2011, 43, 204-218.	1.0	32
32	Inhibiting Effect of Tetralin on the Pyrolytic Decomposition of Hexadecane. Comparison with Toluene. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 4689-4701.	1.8	31
33	Influence of EGR compounds on the oxidation of an HCCI-diesel surrogate. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 2851-2859.	2.4	31
34	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.	2.4	31
35	Kinetic modelling of a surrogate diesel fuel applied to 3D auto-ignition in HCCI engines. <i>International Journal of Vehicle Design</i> , 2007, 44, 124.	0.1	28
36	Pushing the limits of intensified CO ₂ post-combustion capture by gas-liquid absorption through a membrane contactor. <i>Chemical Engineering and Processing: Process Intensification</i> , 2015, 91, 7-22.	1.8	28

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37	CHEMICAL IMPACT OF CO AND H ₂ ADDITION ON THE AUTO-IGNITION DELAY OF HOMOGENEOUS N-HEPTANE/AIR MIXTURES. Combustion Science and Technology, 2007, 179, 1937-1962.	1.2	27
38	Thermal evolution of n- and iso-alkanes in oils. Part 1: Pyrolysis model for a mixture of 78 alkanes (C1-C32) including 13,206 free radical reactions. Organic Geochemistry, 2011, 42, 439-450.	0.9	27
39	Mechanistic modeling of the thermal cracking of methylcyclohexane near atmospheric pressure, from 523 to 1273K: Identification of aromatization pathways. Journal of Analytical and Applied Pyrolysis, 2013, 103, 240-254.	2.6	27
40	Reduced chemical scheme for modelling warm to hot hydrogen-dominated atmospheres. Astronomy and Astrophysics, 2019, 624, A58.	2.1	26
41	Evaluating the intensification potential of membrane contactors for gas absorption in a chemical solvent: A generic one-dimensional methodology and its application to CO ₂ absorption in monoethanolamine. Journal of Membrane Science, 2012, 389, 1-16.	4.1	25
42	Kinetic modelling of char gasification by accounting for the evolution of the reactive surface area. Chemical Engineering Science, 2015, 138, 281-290.	1.9	25
43	Thermal and Kinetic Impact of CO, CO ₂ , and H ₂ O on the Postoxidation of IC-Engine Exhaust Gases. Combustion Science and Technology, 2010, 182, 39-59.	1.2	23
44	Evaluating the effects of CO ₂ capture benchmarks on efficiency and costs of membrane systems for post-combustion capture: A parametric simulation study. International Journal of Greenhouse Gas Control, 2017, 63, 449-461.	2.3	23
45	CO ₂ /N ₂ Reverse Selective Gas Separation Membranes: Technological Opportunities and Scientific Challenges. Industrial & Engineering Chemistry Research, 2009, 48, 3700-3701.	1.8	21
46	An extended mechanism including high pressure conditions (700bar) for toluene pyrolysis. Journal of Analytical and Applied Pyrolysis, 2010, 87, 236-247.	2.6	21
47	Reassessment of the Kinetic Influence of Toluene on n-Alkane Pyrolysis. Energy & Fuels, 2010, 24, 3817-3830.	2.5	19
48	Thermal cracking of n-butylcyclohexane at high pressure (100 bar) – Part 1: Experimental study. Journal of Analytical and Applied Pyrolysis, 2016, 117, 1-16.	2.6	19
49	Experimental Study and Modeling of the Role of Hydronaphthalenics on the Thermal Stability of Hydrocarbons under Laboratory and Geological Conditions. Industrial & Engineering Chemistry Research, 2005, 44, 8972-8987.	1.8	17
50	Prediction of Auto-Ignition Temperatures and Delays for Gas Turbine Applications. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	0.5	17
51	Contribution to Scramjet Active Cooling Analysis Using N-dodecane Decomposition Model. , 2003, , .		16
52	Thermal cracking of n-butylcyclohexane at high pressure (100 bar) – Part 2: Mechanistic modeling. Journal of Analytical and Applied Pyrolysis, 2016, 120, 174-185.	2.6	16
53	The Deep Composition of Uranus and Neptune from In Situ Exploration and Thermochemical Modeling. Space Science Reviews, 2020, 216, 1.	3.7	16
54	Kinetic parameters for the thermal cracking of simple hydrocarbons: From laboratory to geological time-temperature conditions. Journal of Analytical and Applied Pyrolysis, 2017, 125, 40-49.	2.6	15

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55	Membrane contactors for intensified post combustion carbon dioxide capture by gas-liquid absorption in MEA: A parametric study. <i>Chemical Engineering Research and Design</i> , 2012, 90, 2325-2337.	2.7	14
56	Modeling the Laminar Flame Speed of Natural Gas and Gasoline Surrogates. , 0, , .		13
57	Kinetic modeling of 1-methylnaphthalene pyrolysis at high pressure (100 bar). <i>Journal of Analytical and Applied Pyrolysis</i> , 2017, 124, 542-562.	2.6	13
58	Thermal cracking of n-butylbenzene at high pressure: Experimental study and kinetic modelling. <i>Journal of Analytical and Applied Pyrolysis</i> , 2018, 133, 234-245.	2.6	13
59	JTHERGAS: Thermodynamic estimation from 2D graphical representations of molecules. <i>Energy</i> , 2012, 43, 161-171.	4.5	12
60	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 1: Low-Conversion Thermal Cracking Modeling. <i>Energy & Fuels</i> , 2012, 26, 2600-2610.	2.5	8
61	Kinetic study of abatement of low concentration of dibenzofuran by oxidation - Effects of co-reactants. <i>Chemical Engineering Journal</i> , 2013, 218, 154-163.	6.6	8
62	Influence of pressure (100 Pa-100 Mpa) on the pyrolysis of an alkane at moderate temperature (603) Tj ETQq0 0 0 rgBT /Overlock 10 442-451.	2.6	8
63	Development of a Detailed Kinetic Model for the Oxidation of n-Butane in the Liquid Phase. <i>Journal of Physical Chemistry B</i> , 2021, 125, 6955-6967.	1.2	8
64	DME as a Potential Alternative Fuel for Gas Turbines: A Numerical Approach to Combustion and Oxidation Kinetics. , 2011, , .		7
65	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 2. Migration and Separation Gas Chromatography Modeling. <i>Energy & Fuels</i> , 2013, 27, 2336-2350.	2.5	6
66	Combustion and Oxidation Kinetics of Alternative Gas Turbines Fuels. , 2014, , .		6
67	Influence of H2S on the thermal cracking of alkylbenzenes at high pressure (70 MPa) and moderate temperature (583-623 K). <i>Journal of Analytical and Applied Pyrolysis</i> , 2019, 140, 423-433.	2.6	6
68	Ethanol as an Alternative Fuel in Gas Turbines: Combustion and Oxidation Kinetics. , 2010, , .		5
69	Pyrolysis of n-octane at very low concentration and low temperature. <i>Journal of Analytical and Applied Pyrolysis</i> , 2016, 117, 282-289.	2.6	5
70	Modelling of Weak Acid Conversion in an EDI Cell. <i>Separation Science and Technology</i> , 2010, 45, 1015-1024.	1.3	4
71	Interplay of inlet temperature and humidity on energy penalty for CO2 post-combustion capture: Rigorous analysis and simulation of a single stage gas permeation process. <i>Energy</i> , 2016, 116, 517-525.	4.5	4
72	Thermal cracking of 1-n-butyldecalin at high pressure (100 bar). <i>Journal of Analytical and Applied Pyrolysis</i> , 2017, 123, 204-215.	2.6	3

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73	Gas Turbines and Biodiesel: A Clarification of the Relative NOX Indices of FAME, Gasoil, and Natural Gas. , 2009, , .		2
74	Laminar Flame Velocity of Components of Natural Gas. , 2011, , .		2
75	Data supporting the validation of a simulation model for multi-component gas separation in polymeric membranes. Data in Brief, 2016, 9, 776-780.	0.5	2
76	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 3. Coupled Pyrolysis-GC Modeling. Energy & Fuels, 2019, 33, 2045-2056.	2.5	1
77	Prediction of Auto-Ignition Temperatures and Delays for Gas Turbine Applications. , 2015, , .		0
78	Development of a Model for Auto-Ignition Delays and its Use for the Prediction of Premix Combustion Reliability. , 2016, , .		0
79	Reactive Transport and Its Implications on Heavy Oil HTGC Analysis. A Coupled Thermo-Hydro-Chemical (THC) Multiphysics Modelling Approach. , 0, , .		0