Roda Bounaceur

List of Publications by Year in descending order

79 papers	3,639 citations	147801 31 h-index	133252 59 g-index
81 all docs	81 docs citations	81 times ranked	3277 citing authors

#	Article	IF	Citations
1	Development of a Detailed Kinetic Model for the Oxidation of n-Butane in the Liquid Phase. Journal of Physical Chemistry B, 2021, 125, 6955-6967.	2.6	8
2	The Deep Composition of Uranus and Neptune from In Situ Exploration and Thermochemical Modeling. Space Science Reviews, 2020, 216, 1.	8.1	16
3	New chemical scheme for giant planet thermochemistry. Astronomy and Astrophysics, 2020, 634, A78.	5.1	34
4	Influence of H2S on the thermal cracking of alkylbenzenes at high pressure (70â€‰MPa) and moderate temperature (583â€“623â€‰K). Journal of Analytical and Applied Pyrolysis, 2019, 140, 423-433.	5.5	6
5	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.	5.1	1
6	Reduced chemical scheme for modelling warm to hot hydrogen-dominated atmospheres. Astronomy and Astrophysics, 2019, 624, A58.	5.1	26
7	Thermal cracking of n-butylbenzene at high pressure: Experimental study and kinetic modelling. Journal of Analytical and Applied Pyrolysis, 2018, 133, 234-245.	5.5	13
8	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.	5.5	15
9	Kinetic modeling of 1-methylnaphthalene pyrolysis at high pressure (100 bar). Journal of Analytical and Applied Pyrolysis, 2017, 124, 542-562.	5.5	13
10	Thermal cracking of 1-n-butyldecalin at high pressure (100 bar). Journal of Analytical and Applied Pyrolysis, 2017, 123, 204-215.	5.5	3
11	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.	4.6	23
12	Rigorous variable permeability modelling and process simulation for the design of polymeric membrane gas separation units: MEMSIC simulation tool. Journal of Membrane Science, 2017, 523, 77-91.	8.2	50
13	Prediction of Auto-Ignition Temperatures and Delays for Gas Turbine Applications. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	1.1	17
14	Development of a Model for Auto-Ignition Delays and its Use for the Prediction of Premix Combustion Reliability. , 2016, , .		0
15	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. Energy, 2016, 116, 517-525.	8.8	4
16	Data supporting the validation of a simulation model for multi-component gas separation in polymeric membranes. Data in Brief, 2016, 9, 776-780.	1.0	2
17	Influence of pressure (100 Paâ€“100 Mpa) on the pyrolysis of an alkane at moderate temperature (603) Tj ETQq1 1 0.784314 rgBT /Ov 442-451.	5.5	8
18	Thermal cracking of n -butylcyclohexane at high pressure (100 bar)â€”Part 2: Mechanistic modeling. Journal of Analytical and Applied Pyrolysis, 2016, 120, 174-185.	5.5	16

#	Article	IF	Citations
19	Intramolecular effects on the kinetics of unimolecular reactions of Î²-HOROOË™ and HOQË™OOH radicals. Physical Chemistry Chemical Physics, 2016, 18, 12231-12251.	2.8	57
20	Thermal cracking of n -butylcyclohexane at high pressure (100 bar)â€"Part 1: Experimental study. Journal of Analytical and Applied Pyrolysis, 2016, 117, 1-16.	5.5	19
21	Pyrolysis of n- octane at very low concentration and low temperature. Journal of Analytical and Applied Pyrolysis, 2016, 117, 282-289.	5.5	5
22	Prediction of Auto-Ignition Temperatures and Delays for Gas Turbine Applications. , 2015, , .		0
23	New chemical scheme for studying carbon-rich exoplanet atmospheres. Astronomy and Astrophysics, 2015, 577, A33.	5.1	64
24	Pushing the limits of intensified CO2 post-combustion capture by gasâ€"liquid absorption through a membrane contactor. Chemical Engineering and Processing: Process Intensification, 2015, 91, 7-22.	3.6	28
25	Experimental and modeling study of burning velocities for alkyl aromatic components relevant to diesel fuels. Proceedings of the Combustion Institute, 2015, 35, 341-348.	3.9	43
26	Determining predictive uncertainties and global sensitivities for large parameter systems: A case study for n -butane oxidation. Proceedings of the Combustion Institute, 2015, 35, 607-616.	3.9	31
27	The oxidation of large alkylbenzenes: An experimental and modeling study. Proceedings of the Combustion Institute, 2015, 35, 349-356.	3.9	34
28	Measurements of Laminar Burning Velocities above Atmospheric Pressure Using the Heat Flux Methodâ€"Application to the Case of n-Pentane. Energy & Fuels, 2015, 29, 398-404.	5.1	49
29	Experimental and Modeling Investigation of the Low-Temperature Oxidation of Dimethyl Ether. Journal of Physical Chemistry A, 2015, 119, 7905-7923.	2.5	85
30	Kinetic modelling of char gasification by accounting for the evolution of the reactive surface area. Chemical Engineering Science, 2015, 138, 281-290.	3.8	25
31	Combustion and Oxidation Kinetics of Alternative Gas Turbines Fuels. , 2014, , .		6
32	Laminar burning velocity of gasolines with addition of ethanol. Fuel, 2014, 115, 162-169.	6.4	248
33	Kinetic study of abatement of low concentration of dibenzofuran by oxidation â€“ Effects of co-reactants. Chemical Engineering Journal, 2013, 218, 154-163.	12.7	8
34	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.	5.5	27
35	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 2. Migration and Separation Gas Chromatography Modeling. Energy & Fuels, 2013, 27, 2336-2350.	5.1	6
36	A chemical model for the atmosphere of hot Jupiters. Astronomy and Astrophysics, 2012, 546, A43.	5.1	181

#	Article	IF	Citations
37	Membrane contactors for intensified post combustion carbon dioxide capture by gasâ€“liquid absorption in MEA: A parametric study. Chemical Engineering Research and Design, 2012, 90, 2325-2337.	5.6	14
38	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 1: Low-Conversion Thermal Cracking Modeling. Energy & Fuels, 2012, 26, 2600-2610.	5.1	8
39	JTHERGAS: Thermodynamic estimation from 2D graphical representations of molecules. Energy, 2012, 43, 161-171.	8.8	12
40	Experimental and modeling study of the oxidation of n-butylbenzene. Combustion and Flame, 2012, 159, 1399-1416.	5.2	59
41	Evaluating the intensification potential of membrane contactors for gas absorption in a chemical solvent: A generic one-dimensional methodology and its application to CO2 absorption in monoethanolamine. Journal of Membrane Science, 2012, 389, 1-16.	8.2	25
42	Towards cleaner combustion engines through groundbreaking detailed chemical kinetic models. Chemical Society Reviews, 2011, 40, 4762.	38.1	111
43	Measurements of Laminar Flame Velocity for Components of Natural Gas. Energy & Fuels, 2011, 25, 3875-3884.	5.1	181
44	Thermal evolution of n- and iso-alkanes in oils. Part 1: Pyrolysis model for a mixture of 78 alkanes (C1â€“C32) including 13,206 free radical reactions. Organic Geochemistry, 2011, 42, 439-450.	1.8	27
45	DME as a Potential Alternative Fuel for Gas Turbines: A Numerical Approach to Combustion and Oxidation Kinetics. , 2011, , .		7
46	Laminar Flame Velocity of Components of Natural Gas. , 2011, , .		2
47	Modelling intra-particle phenomena of biomass pyrolysis. Chemical Engineering Research and Design, 2011, 89, 2136-2146.	5.6	56
48	Oxidation of small unsaturated methyl and ethyl esters. International Journal of Chemical Kinetics, 2011, 43, 204-218.	1.6	32
49	Thermal and Kinetic Impact of CO, CO₂, and H₂O on the Postoxidation of IC-Engine Exhaust Gases. Combustion Science and Technology, 2010, 182, 39-59.	2.3	23
50	Ethanol as an Alternative Fuel in Gas Turbines: Combustion and Oxidation Kinetics. , 2010, , .		5
51	An extended mechanism including high pressure conditions (700bar) for toluene pyrolysis. Journal of Analytical and Applied Pyrolysis, 2010, 87, 236-247.	5.5	21
52	Adiabatic flame temperature from biofuels and fossil fuels and derived effect on NOx emissions. Fuel Processing Technology, 2010, 91, 229-235.	7.2	104
53	An experimental and kinetic modeling study of the autoignition of Î±-methylnaphthalene/air and Î±-methylnaphthalene/n-decane/air mixtures at elevated pressures. Combustion and Flame, 2010, 157, 1976-1988.	5.2	67
54	Modelling of Weak Acid Conversion in an EDI Cell. Separation Science and Technology, 2010, 45, 1015-1024.	2.5	4

#	Article	IF	Citations
55	Reassessment of the Kinetic Influence of Toluene on n-Alkane Pyrolysis. Energy & Fuels, 2010, 24, 3817-3830.	5.1	19
56	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. Organic Geochemistry, 2010, 41, 146-167.	1.8	57
57	Gas Turbines and Biodiesel: A Clarification of the Relative NOX Indices of FAME, Gasoil, and Natural Gas. , 2009, , .		2
58	Influence of EGR compounds on the oxidation of an HCCI-diesel surrogate. Proceedings of the Combustion Institute, 2009, 32, 2851-2859.	3.9	31
59	Biogas, membranes and carbon dioxide capture. Journal of Membrane Science, 2009, 328, 11-14.	8.2	106
60	Influence of the position of the double bond on the autoignition of linear alkenes at low temperature. Proceedings of the Combustion Institute, 2009, 32, 387-394.	3.9	66
61	A hybrid process combining oxygen enriched air combustion and membrane separation for post-combustion carbon dioxide capture. Separation and Purification Technology, 2009, 68, 30-36.	7.9	70
62	Modeling of autoignition and NO sensitization for the oxidation of IC engine surrogate fuels. Combustion and Flame, 2009, 156, 505-521.	5.2	61
63	CO₂/N₂ Reverse Selective Gas Separation Membranes: Technological Opportunities and Scientific Challenges. Industrial & Engineering Chemistry Research, 2009, 48, 3700-3701.	3.7	21
64	Kinetic modelling of a surrogate diesel fuel applied to 3D auto-ignition in HCCI engines. International Journal of Vehicle Design, 2007, 44, 124.	0.3	28
65	CHEMICAL IMPACT OF CO AND H₂ADDITION ON THE AUTO-IGNITION DELAY OF HOMOGENEOUS N-HEPTANE/AIR MIXTURES. Combustion Science and Technology, 2007, 179, 1937-1962.	2.3	27
66	Primary Mechanism of the Thermal Decomposition of Tricyclodecane. Journal of Physical Chemistry A, 2006, 110, 11298-11314.	2.5	82
67	Membrane processes for post-combustion carbon dioxide capture: A parametric study. Energy, 2006, 31, 2556-2570.	8.8	260
68	Experimental and modeling study of the oxidation of xylenes. International Journal of Chemical Kinetics, 2006, 38, 284-302.	1.6	88
69	Progress toward a unified detailed kinetic model for the autoignition of alkanes from C4 to C10 between 600 and 1200 K. Combustion and Flame, 2005, 142, 170-186.	5.2	272
70	Experimental and modeling study of the oxidation of toluene. International Journal of Chemical Kinetics, 2005, 37, 25-49.	1.6	176
71	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.	3.7	17
72	Experimental and modelling investigation of the thermal decomposition of n-dodecane. Journal of Analytical and Applied Pyrolysis, 2004, 71, 865-881.	5.5	118

#	Article	IF	Citations
73	Contribution to Scramjet Active Cooling Analysis Using N-dodecane Decomposition Model. , 2003, , .		16
74	Inhibiting Effect of Tetralin on the Pyrolytic Decomposition of Hexadecane. Comparison with Toluene. Industrial & Engineering Chemistry Research, 2002, 41, 4689-4701.	3.7	31
75	Up to what temperature is petroleum stable? New insights from a 5200 free radical reactions model. Organic Geochemistry, 2002, 33, 1487-1499.	1.8	54
76	Modeling of hydrocarbons pyrolysis at low temperature. Automatic generation of free radicals mechanisms. Journal of Analytical and Applied Pyrolysis, 2002, 64, 103-122.	5.5	51
77	Mechanistic Modeling of the Thermal Cracking of Tetralin. Industrial & Engineering Chemistry Research, 2000, 39, 4152-4165.	3.7	42
78	Modeling the Laminar Flame Speed of Natural Gas and Gasoline Surrogates. , 0, , .		13
79	Reactive Transport and Its Implications on Heavy Oil HTGC Analysis. A Coupled Thermo-Hydro-Chemical (THC) Multiphysics Modelling Approach. , 0, , .		0