

# J Ruben Ruiz-Femenia

## List of Publications by Year in descending order

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63  
papers

1,069  
citations

361296  
20  
h-index

454834  
30  
g-index

63  
all docs

63  
docs citations

63  
times ranked

1175  
citing authors

#	ARTICLE	IF	CITATIONS
1	Shale gas flowback water desalination: Single vs multiple-effect evaporation with vapor recompression cycle and thermal integration. <i>Desalination</i> , 2017, 404, 230-248.	4.0	76
2	Study of the catalytic pyrolysis behaviour of polyethylene-polypropylene mixtures. <i>Journal of Analytical and Applied Pyrolysis</i> , 2005, 74, 387-392.	2.6	69
3	On the use of Principal Component Analysis for reducing the number of environmental objectives in multi-objective optimization: Application to the design of chemical supply chains. <i>Chemical Engineering Science</i> , 2012, 69, 146-158.	1.9	69
4	Multi-objective optimization of environmentally conscious chemical supply chains under demand uncertainty. <i>Chemical Engineering Science</i> , 2013, 95, 1-11.	1.9	62
5	Rigorous Design of Complex Distillation Columns Using Process Simulators and the Particle Swarm Optimization Algorithm. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 15621-15634.	1.8	51
6	Pyrolysis of polymers in the presence of a commercial clay. <i>Polymer Degradation and Stability</i> , 2005, 88, 456-460.	2.7	43
7	Systematic approach for the life cycle multi-objective optimization of buildings combining objective reduction and surrogate modeling. <i>Energy and Buildings</i> , 2016, 130, 506-518.	3.1	38
8	An alternative disjunctive optimization model for heat integration with variable temperatures. <i>Computers and Chemical Engineering</i> , 2013, 56, 12-26.	2.0	35
9	A new technique for recovering energy in thermally coupled distillation using vapor recompression cycles. <i>AIChE Journal</i> , 2013, 59, 3767-3781.	1.8	34
10	Optimal Pretreatment System of Flowback Water from Shale Gas Production. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 4386-4398.	1.8	34
11	Optimization of multistage membrane distillation system for treating shale gas produced water. <i>Desalination</i> , 2019, 460, 15-27.	4.0	32
12	Process optimization for zero-liquid discharge desalination of shale gas flowback water under uncertainty. <i>Journal of Cleaner Production</i> , 2017, 164, 1219-1238.	4.6	31
13	Thermal and catalytic pyrolysis of crosslinked polyethylene. <i>Journal of Analytical and Applied Pyrolysis</i> , 2006, 76, 254-259.	2.6	30
14	Systematic Tools for the Conceptual Design of Inherently Safer Chemical Processes. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 7301-7313.	1.8	28
15	Integration of modular process simulators under the Generalized Disjunctive Programming framework for the structural flowsheet optimization. <i>Computers and Chemical Engineering</i> , 2014, 67, 13-25.	2.0	25
16	Oxidative degradation of EVA copolymers in the presence of MCM-41. <i>Journal of Analytical and Applied Pyrolysis</i> , 2006, 76, 138-143.	2.6	24
17	MINLP-based Analytic Hierarchy Process to simplify multi-objective problems: Application to the design of biofuels supply chains using on field surveys. <i>Computers and Chemical Engineering</i> , 2017, 102, 64-80.	2.0	22
18	Holistic Planning Model for Sustainable Water Management in the Shale Gas Industry. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 13131-13143.	1.8	22

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19	Study of polyethylene crosslinking with polybutadiene as coagent. <i>Polymer Testing</i> , 2005, 24, 925-931.	2.3	20
20	Multi-objective optimization of combined synthesis gas reforming technologies. <i>Journal of CO2 Utilization</i> , 2017, 22, 355-373.	3.3	20
21	Integration of different models in the design of chemical processes: Application to the design of a power plant. <i>Applied Energy</i> , 2014, 124, 256-273.	5.1	19
22	Multiobjective Early Design of Complex Distillation Sequences Considering Economic and Inherent Safety Criteria. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 6992-7007.	1.8	19
23	Optimal carbon dioxide and hydrogen utilization in carbon monoxide production. <i>Journal of CO2 Utilization</i> , 2019, 34, 215-230.	3.3	18
24	Alternative carbon dioxide utilization in dimethyl carbonate synthesis and comparison with current technologies. <i>Journal of CO2 Utilization</i> , 2021, 45, 101436.	3.3	15
25	Additional considerations to the paper entitled: "Computational aspects of kinetic analysis. Part B: The ICTAC Kinetics Project" the decomposition kinetics of calcium carbonate revisited, or some tips on survival in the kinetic minefield. <i>Thermochimica Acta</i> , 2006, 445, 92-96.	1.2	14
26	Crosslinking of rotational molding foams of polyethylene. <i>Polymer Engineering and Science</i> , 2007, 47, 1804-1812.	1.5	13
27	MILP method for objective reduction in multi-objective optimization. <i>Computers and Chemical Engineering</i> , 2018, 108, 382-394.	2.0	13
28	Thermo-economic and environmental optimization of a solar-driven zero-liquid discharge system for shale gas wastewater desalination. <i>Desalination</i> , 2021, 511, 115098.	4.0	13
29	A cooperative game strategy for designing sustainable supply chains under the emissions trading system. <i>Journal of Cleaner Production</i> , 2021, 285, 124845.	4.6	12
30	Optimization of Chemical Processes Using Surrogate Models Based on a Kriging Interpolation. <i>Computer Aided Chemical Engineering</i> , 2015, , 179-184.	0.3	11
31	Multi-objective Optimization of a Carbon Dioxide Utilization Superstructure for the Synthesis of Formic and Acetic Acid. <i>Computer Aided Chemical Engineering</i> , 2018, 43, 1419-1424.	0.3	11
32	OFISI, a novel optimizable inherent safety index based on fuzzy logic. <i>Computers and Chemical Engineering</i> , 2019, 129, 106526.	2.0	11
33	Simulation of the gas-assisted injection molding process using a mid-plane model of a contained-channel part. <i>Journal of Materials Processing Technology</i> , 2006, 178, 350-357.	3.1	10
34	Economic and environmental strategic water management in the shale gas industry: Application of cooperative game theory. <i>AIChE Journal</i> , 2019, 65, e16725.	1.8	10
35	Velocity profiles and circulation in Stefan-diffusion. <i>Chemical Engineering Science</i> , 2008, 63, 4685-4693.	1.9	9
36	Teaching mathematical modeling software for multiobjective optimization in chemical engineering courses. <i>Education for Chemical Engineers</i> , 2012, 7, e169-e180.	2.8	8

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37	Multistage Membrane Distillation for the Treatment of Shale Gas Flowback Water: Multi-Objective Optimization under Uncertainty. <i>Computer Aided Chemical Engineering</i> , 2017, 40, 571-576.	0.3	8
38	Revisiting Classic Acetic Acid Synthesis: Optimal Hydrogen Consumption and Carbon Dioxide Utilization. <i>Computer Aided Chemical Engineering</i> , 2019, 46, 145-150.	0.3	8
39	Study of the formulations and process conditions in the crosslinking of polyethylene foams at atmospheric pressure. <i>Journal of Applied Polymer Science</i> , 2008, 107, 2028-2037.	1.3	7
40	Guidelines for the design of efficient sono-microreactors. <i>Green Processing and Synthesis</i> , 2014, 3, .	1.3	7
41	Optimal Design of a Hybrid Membrane System Combining Reverse and Forward Osmosis for Seawater Desalination. <i>Computer Aided Chemical Engineering</i> , 2014, , 1399-1404.	0.3	6
42	Multi-objective Optimization of a Methanol Synthesis Process Superstructure with Two-step Carbon Dioxide Consumption. <i>Computer Aided Chemical Engineering</i> , 2017, 40, 721-726.	0.3	6
43	Multi-Objective Optimization of Renewable Energy-Driven Desalination Systems. <i>Computer Aided Chemical Engineering</i> , 2017, , 499-504.	0.3	6
44	Incorporating CO2 emission trading in the optimal design and planning of chemical supply chain networks under uncertainty. <i>Computer Aided Chemical Engineering</i> , 2012, 30, 127-131.	0.3	5
45	Combining Forward and Reverse Osmosis for Shale Gas Wastewater Treatment to Minimize Cost and Freshwater Consumption. <i>Computer Aided Chemical Engineering</i> , 2017, 40, 2725-2730.	0.3	5
46	Optimal Shale Gas Flowback Water Desalination under Correlated Data Uncertainty. <i>Computer Aided Chemical Engineering</i> , 2017, , 943-948.	0.3	5
47	MILP models for objective reduction in multi-objective optimization: Error measurement considerations and non-redundancy ratio. <i>Computers and Chemical Engineering</i> , 2018, 115, 323-332.	2.0	5
48	Dimethyl Carbonate Production Process from Urea and Methanol. <i>Computer Aided Chemical Engineering</i> , 2018, 43, 731-736.	0.3	4
49	Minimizing the total annualized cost of "SIDEM" seawater desalination unit. , 0, 115, 181-193.		4
50	Logic-Based Outer-Approximation Algorithm for Solving Discrete-Continuous Dynamic Optimization Problems. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 5067-5080.	1.8	3
51	Mixed integer non-linear programming model for reliable and safer design at an early stage. <i>Computers and Chemical Engineering</i> , 2021, 147, 107256.	2.0	3
52	Minimization of the life cycle impact of chemical supply chain networks under demand uncertainty. <i>Computer Aided Chemical Engineering</i> , 2011, 29, 1195-1199.	0.3	2
53	Handling of Uncertainty in Life Cycle Inventory by Correlated Multivariate Lognormal Distributions: Application to the Design of Supply Chain Networks. <i>Computer Aided Chemical Engineering</i> , 2014, 33, 1075-1080.	0.3	2
54	Systematic Methods for Inherently Safer Process Design: Comparison among Inherent Safety Indexes by Dimensionality Reduction. <i>Computer Aided Chemical Engineering</i> , 2017, , 1237-1242.	0.3	2

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55	Sustainable Optimal Strategic Planning for Shale Water Management. Computer Aided Chemical Engineering, 2018, , 657-662.	0.3	2
56	A Novel Optimizable Inherent Safety Index Based on Fuzzy Logic. Computer Aided Chemical Engineering, 2019, 46, 559-564.	0.3	2
57	Water Distribution Network Optimization Considering Uncertainties in the Nodes Demands. Computer Aided Chemical Engineering, 2020, 48, 1183-1188.	0.3	2
58	Rotational Moulding of PVC Plastisol. International Polymer Processing, 2005, 20, 47-54.	0.3	2
59	Modelling and optimization framework for the multi-objective design of buildings. Computer Aided Chemical Engineering, 2016, , 883-888.	0.3	1
60	Integration of Chemical Process Simulators with Algebraic Modeling Languages. Computer Aided Chemical Engineering, 2020, , 1891-1896.	0.3	1
61	Analysis of the relative strength of the singular values obtained from the non-parametric kinetic method. Journal of Thermal Analysis and Calorimetry, 2012, 107, 585-596.	2.0	0
62	Design of once-through multistage flash process under the Generalized Disjunctive Programming framework. , 2017, , .		0
63	Logic-Based Outer Approximation for the Design of Discrete-Continuous Dynamic Systems with Implicit Discontinuities. Computer Aided Chemical Engineering, 2014, 33, 337-342.	0.3	0