

Raul Molina

List of Publications by Year in descending order

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63
papers

2,751
citations

147566

31
h-index

174990

52
g-index

64
all docs

64
docs citations

64
times ranked

3363
citing authors

#	ARTICLE	IF	CITATIONS
1	Heterogeneous photo-Fenton degradation of phenolic aqueous solutions over iron-containing SBA-15 catalyst. <i>Applied Catalysis B: Environmental</i> , 2005, 60, 181-190.	10.8	151
2	Heterogeneous catalytic wet peroxide oxidation systems for the treatment of an industrial pharmaceutical wastewater. <i>Water Research</i> , 2009, 43, 4010-4018.	5.3	135
3	Nanocomposite Fe ₂ O ₃ /SBA-15: An efficient and stable catalyst for the catalytic wet peroxidation of phenolic aqueous solutions. <i>Chemical Engineering Journal</i> , 2007, 131, 245-256.	6.6	126
4	Degradation of phenolic aqueous solutions by high frequency sono-Fenton systems (US ² /Fe ₂ O ₃ /SBA-15/H ₂ O ₂). <i>Applied Catalysis B: Environmental</i> , 2009, 90, 380-388.	10.8	121
5	Iron species incorporated over different silica supports for the heterogeneous photo-Fenton oxidation of phenol. <i>Applied Catalysis B: Environmental</i> , 2007, 70, 452-460.	10.8	114
6	Integrated heterogeneous sono-photo Fenton processes for the degradation of phenolic aqueous solutions. <i>Ultrasonics Sonochemistry</i> , 2009, 16, 417-424.	3.8	110
7	Coupling membrane separation and photocatalytic oxidation processes for the degradation of pharmaceutical pollutants. <i>Water Research</i> , 2013, 47, 5647-5658.	5.3	103
8	Mineralization of phenol by a heterogeneous ultrasound/Fe-SBA-15/H ₂ O ₂ process: Multivariate study by factorial design of experiments. <i>Applied Catalysis B: Environmental</i> , 2006, 66, 198-207.	10.8	102
9	Enhancement of the advanced Fenton process (Fe ⁰ /H ₂ O ₂) by ultrasound for the mineralization of phenol. <i>Applied Catalysis B: Environmental</i> , 2012, 113-114, 100-106.	10.8	99
10	Treatment of Phenolic Effluents by Catalytic Wet Hydrogen Peroxide Oxidation over Fe ₂ O ₃ /SBA-15 Extruded Catalyst in a Fixed-Bed Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2007, 46, 4396-4405.	1.8	86
11	Comparative life cycle assessment (LCA) study of heterogeneous and homogenous Fenton processes for the treatment of pharmaceutical wastewater. <i>Journal of Cleaner Production</i> , 2016, 124, 21-29.	4.6	85
12	Activity and resistance of iron-containing amorphous, zeolitic and mesostructured materials for wet peroxide oxidation of phenol. <i>Water Research</i> , 2005, 39, 1741-1750.	5.3	82
13	Perovskite materials for hydrogen production by thermochemical water splitting. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 19329-19338.	3.8	77
14	Drugs of abuse in surface and tap waters of the Tagus River basin: Heterogeneous photo-Fenton process is effective in their degradation. <i>Environment International</i> , 2012, 41, 35-43.	4.8	76
15	Toxicity assessment of pharmaceutical compounds on mixed culture from activated sludge using respirometric technique: The role of microbial community structure. <i>Science of the Total Environment</i> , 2018, 630, 809-819.	3.9	70
16	Heterogeneous photo-Fenton treatment for the reduction of pharmaceutical contamination in Madrid rivers and ecotoxicological evaluation by a miniaturized fern spores bioassay. <i>Chemosphere</i> , 2010, 80, 381-388.	4.2	64
17	Nanocomposite of crystalline Fe ₂ O ₃ and CuO particles and mesostructured SBA-15 silica as an active catalyst for wet peroxide oxidation processes. <i>Catalysis Communications</i> , 2006, 7, 478-483.	1.6	59
18	Biological removal of pharmaceutical and personal care products by a mixed microbial culture: Sorption, desorption and biodegradation. <i>Biochemical Engineering Journal</i> , 2013, 81, 108-119.	1.8	58

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19	Municipal sewage sludge to biodiesel by simultaneous extraction and conversion of lipids. <i>Energy Conversion and Management</i> , 2015, 103, 111-118.	4.4	58
20	Biological removal of pharmaceutical compounds using white-rot fungi with concomitant FAME production of the residual biomass. <i>Journal of Environmental Management</i> , 2016, 180, 228-237.	3.8	58
21	Exploring the effects of ZVI addition on resource recovery in the anaerobic digestion process. <i>Chemical Engineering Journal</i> , 2018, 335, 703-711.	6.6	56
22	Elimination of drugs of abuse and their toxicity from natural waters by photo-Fenton treatment. <i>Science of the Total Environment</i> , 2015, 520, 198-205.	3.9	54
23	Techno-economical assessment of coupling Fenton/biological processes for the treatment of a pharmaceutical wastewater. <i>Journal of Environmental Chemical Engineering</i> , 2018, 6, 485-494.	3.3	49
24	Intensification of oxidation capacity using chloroalkanes as additives in hydrodynamic and acoustic cavitation reactors. <i>Ultrasonics Sonochemistry</i> , 2008, 15, 164-170.	3.8	47
25	Crystallization mechanism of Fe-MFI from wetness impregnated Fe ₂ O ₃ •SiO ₂ amorphous xerogels: Role of iron species in Fenton-like processes. <i>Microporous and Mesoporous Materials</i> , 2004, 74, 11-21.	2.2	45
26	Study of the first step of the Mn ₂ O ₃ /MnO thermochemical cycle for solar hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 7017-7025.	3.8	40
27	Experimental and modeling study on removal of pharmaceutically active compounds in rotating biological contactors. <i>Journal of Hazardous Materials</i> , 2014, 274, 473-482.	6.5	37
28	Understanding the role of mediators in the efficiency of advanced oxidation processes using white-rot fungi. <i>Chemical Engineering Journal</i> , 2019, 359, 1427-1435.	6.6	37
29	Treatment of an agrochemical wastewater by integration of heterogeneous catalytic wet hydrogen peroxide oxidation and rotating biological contactors. <i>Chemical Engineering Journal</i> , 2013, 226, 409-415.	6.6	36
30	Life cycle assessment and techno-economic evaluation of alternatives for the treatment of wastewater in a chrome-plating industry. <i>Journal of Cleaner Production</i> , 2018, 172, 2351-2362.	4.6	36
31	<i>Trametes versicolor</i> immobilized on rotating biological contactors as alternative biological treatment for the removal of emerging concern micropollutants. <i>Water Research</i> , 2020, 170, 115313.	5.3	34
32	Kinetic modelling of the first step of Mn ₂ O ₃ /MnO thermochemical cycle for solar hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 18661-18671.	3.8	33
33	Low-cost Fe/SiO ₂ catalysts for continuous Fenton processes. <i>Catalysis Today</i> , 2017, 280, 176-183.	2.2	31
34	Immobilization of active and stable goethite coated-films by a dip-coating process and its application for photo-Fenton systems. <i>Chemical Engineering Journal</i> , 2012, 203, 212-222.	6.6	29
35	Removal of pharmaceutical compounds from urban wastewater by an advanced bio-oxidation process based on fungi <i>Trametes versicolor</i> immobilized in a continuous RBC system. <i>Environmental Science and Pollution Research</i> , 2018, 25, 34884-34892.	2.7	29
36	Thermochemical hydrogen production using manganese cobalt spinels as redox materials. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 13532-13543.	3.8	26

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37	Influence of synthesis routes on the state of Fe-species in SBA-15 mesoporous materials. <i>Studies in Surface Science and Catalysis</i> , 2004, 154, 805-812.	1.5	23
38	Fenton-like catalyst based on a reticulated porous perovskite material: Activity and stability for the on-site removal of pharmaceutical micropollutants in a hospital wastewater. <i>Chemical Engineering Journal</i> , 2020, 401, 126113.	6.6	22
39	H ₂ production by thermochemical water splitting with reticulated porous structures of ceria-based mixed oxide materials. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 17458-17471.	3.8	22
40	Chemical surface modified activated carbon cloth for catalytic wet peroxide oxidation of phenol. <i>Journal of Chemical Technology and Biotechnology</i> , 2014, 89, 1182-1188.	1.6	21
41	Contamination of N-poor wastewater with emerging pollutants does not affect the performance of purple phototrophic bacteria and the subsequent resource recovery potential. <i>Journal of Hazardous Materials</i> , 2020, 385, 121617.	6.5	21
42	Advanced bio-oxidation of fungal mixed cultures immobilized on rotating biological contactors for the removal of pharmaceutical micropollutants in a real hospital wastewater. <i>Journal of Hazardous Materials</i> , 2022, 425, 128002.	6.5	18
43	Catalytic activity of LaCu _{0.5} Mn _{0.5} O ₃ perovskite at circumneutral/basic pH conditions in electro-Fenton processes. <i>Catalysis Today</i> , 2021, 361, 159-164.	2.2	15
44	Intensified-Fenton process for the treatment of phenol aqueous solutions. <i>Water Science and Technology</i> , 2015, 71, 359-365.	1.2	13
45	Application of a Fenton process for the pretreatment of an iron-containing oily sludge: A sustainable management for refinery wastes. <i>Journal of Environmental Management</i> , 2022, 304, 114244.	3.8	13
46	Treatment of an agrochemical wastewater by combined coagulation and Fenton oxidation. <i>Journal of Chemical Technology and Biotechnology</i> , 2014, 89, 1189-1196.	1.6	12
47	KBR (Kinetics in Batch Reactors): a MATLAB-based application with a friendly Graphical User Interface for chemical kinetic model simulation and parameter estimation. <i>Education for Chemical Engineers</i> , 2019, 28, 80-89.	2.8	12
48	Study of the hydrogen production step of the Mn ₂ O ₃ /MnO thermochemical cycle. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 5274-5282.	3.8	11
49	Experimental assessment of the cyclability of the Mn ₂ O ₃ /MnO thermochemical cycle for solar hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 91-100.	3.8	11
50	Hydrogen production by water splitting with Mn _{3-x} Co _x O ₄ mixed oxides thermochemical cycles: A thermodynamic analysis. <i>Energy Conversion and Management</i> , 2020, 216, 112945.	4.4	11
51	Activated carbon cloth: a potential adsorbing/oxidizing catalyst for phenolic wastewater. <i>Water Science and Technology</i> , 2010, 61, 2817-2823.	1.2	10
52	Experimental evaluation and energy analysis of a two-step water splitting thermochemical cycle for solar hydrogen production based on La _{0.8} Sr _{0.2} CoO _{3-δ} perovskite. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 41209-41222.	3.8	10
53	Thermochemical Energy Storage Using the Phase Transitions Brownmillerite -2H Perovskite - Cubic Perovskite in the Ca _{1-x} Sr _x La _{1-x} CoO _{3-δ} ($x=0$ and T_j) ETQ ₁ 1 0.784314 rgB	1.1	8
54	Hydrogen production by thermochemical water splitting with La _{0.8} Al _{0.2} MeO _{3-δ} (Me= Fe, Co, Ni and Cu) perovskites prepared under controlled pH. <i>Catalysis Today</i> , 2022, 390-391, 22-33.	2.2	8

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55	Wastewater treatment as a process and a resource. , 2020, , 19-45.		7
56	KMS platform: A complete tool for modeling chemical and biochemical reactors. Education for Chemical Engineers, 2021, 34, 127-137.	2.8	7
57	Assessment of Voltage Influence in Carbon Dioxide Fixation Process by a Photo-Bioelectrochemical System under Photoheterotrophy. Microorganisms, 2021, 9, 474.	1.6	7
58	Modeling the integrated heterogeneous catalytic fixed-bed reactor and rotating biological contactor system for the treatment of poorly biodegradable industrial agrochemical wastewater. Journal of Environmental Chemical Engineering, 2016, 4, 2313-2321.	3.3	6
59	Alkalinity, and Not the Oxidation State of the Organic Substrate, Is the Key Factor in Domestic Wastewater Treatment by Mixed Cultures of Purple Phototrophic Bacteria. Resources, 2020, 9, 88.	1.6	5
60	Optimization of H2 Production through Minimization of CO2 Emissions by Mixed Cultures of Purple Phototrophic Bacteria in Aqueous Samples. Water (Switzerland), 2020, 12, 2015.	1.2	3
61	Stabilization of iron in micro-and mesoporous ferrisilicates (MFI, MCM-22, SBA-15, and MCM-41) as detected by in situ mÅqssbauer spectroscopy. Studies in Surface Science and Catalysis, 2005, 158, 733-740.	1.5	2
62	Effect of Ultrasound on the Properties of Heterogeneous Catalysts for Sono-Fenton Oxidation Processes. Journal of Advanced Oxidation Technologies, 2008, 11, .	0.5	0
63	A Friendly-Biological Reactor SIMulator (BioReSIM) for studying biological processes in wastewater treatment processes. @tic: Revista D'InnovaciÃ³ Educativa, 2014, .	0.3	0