

Slimane Merouani

List of Publications by Year in descending order

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92
papers

3,153
citations

172386

29
h-index

168321

53
g-index

95
all docs

95
docs citations

95
times ranked

1849
citing authors

#	ARTICLE	IF	CITATIONS
1	Sonochemical degradation of Rhodamine B in aqueous phase: Effects of additives. Chemical Engineering Journal, 2010, 158, 550-557.	6.6	304
2	Influence of bicarbonate and carbonate ions on sonochemical degradation of Rhodamine B in aqueous phase. Journal of Hazardous Materials, 2010, 175, 593-599.	6.5	169
3	Sensitivity of free radicals production in acoustically driven bubble to the ultrasonic frequency and nature of dissolved gases. Ultrasonics Sonochemistry, 2015, 22, 41-50.	3.8	134
4	Effects of ultrasound frequency and acoustic amplitude on the size of sonochemically active bubbles – Theoretical study. Ultrasonics Sonochemistry, 2013, 20, 815-819.	3.8	133
5	Influence of experimental parameters on sonochemistry dosimetries: KI oxidation, Fricke reaction and H ₂ O ₂ production. Journal of Hazardous Materials, 2010, 178, 1007-1014.	6.5	132
6	Theoretical estimation of the temperature and pressure within collapsing acoustical bubbles. Ultrasonics Sonochemistry, 2014, 21, 53-59.	3.8	128
7	Persulfate-enhanced sonochemical degradation of naphthol blue black in water: Evidence of sulfate radical formation. Ultrasonics Sonochemistry, 2017, 34, 580-587.	3.8	116
8	A method for predicting the number of active bubbles in sonochemical reactors. Ultrasonics Sonochemistry, 2015, 22, 51-58.	3.8	103
9	Modeling of ultrasonic degradation of non-volatile organic compounds by Langmuir-type kinetics. Ultrasonics Sonochemistry, 2010, 17, 773-782.	3.8	81
10	Mechanism of the sonochemical production of hydrogen. International Journal of Hydrogen Energy, 2015, 40, 4056-4064.	3.8	77
11	Sonochemical degradation of naphthol blue black in water: Effect of operating parameters. Ultrasonics Sonochemistry, 2015, 26, 40-47.	3.8	72
12	Efficient photocatalytic degradation of Safranin O by integrating solar-UV/TiO ₂ /persulfate treatment: Implication of sulfate radical in the oxidation process and effect of various water matrix components. Journal of Photochemistry and Photobiology A: Chemistry, 2017, 345, 80-91.	2.0	72
13	Efficient degradation method of emerging organic pollutants in marine environment using UV/periodate process: Case of chlorazol black. Marine Pollution Bulletin, 2018, 126, 557-564.	2.3	72
14	Computational engineering study of hydrogen production via ultrasonic cavitation in water. International Journal of Hydrogen Energy, 2016, 41, 832-844.	3.8	70
15	Energy analysis during acoustic bubble oscillations: Relationship between bubble energy and sonochemical parameters. Ultrasonics, 2014, 54, 227-232.	2.1	67
16	Improvement of sonochemical degradation of Brilliant blue R in water using periodate ions: Implication of iodine radicals in the oxidation process. Ultrasonics Sonochemistry, 2017, 37, 344-350.	3.8	65
17	Computer simulation of chemical reactions occurring in collapsing acoustical bubble: dependence of free radicals production on operational conditions. Research on Chemical Intermediates, 2015, 41, 881-897.	1.3	63
18	Experimental and numerical investigation of the effect of liquid temperature on the sonolytic degradation of some organic dyes in water. Ultrasonics Sonochemistry, 2016, 28, 382-392.	3.8	58

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19	New interpretation of the effects of argon-saturating gas toward sonochemical reactions. <i>Ultrasonics Sonochemistry</i> , 2015, 23, 37-45.	3.8	53
20	The size of active bubbles for the production of hydrogen in sonochemical reaction field. <i>Ultrasonics Sonochemistry</i> , 2016, 32, 320-327.	3.8	51
21	Heat and mass transfer during the storage of hydrogen in LaNi ₅ -based metal hydride: 2D simulation results for a large scale, multi-pipes fixed-bed reactor. <i>International Journal of Heat and Mass Transfer</i> , 2020, 147, 118939.	2.5	49
22	Comprehensive experimental and numerical investigations of the effect of frequency and acoustic intensity on the sonolytic degradation of naphthol blue black in water. <i>Ultrasonics Sonochemistry</i> , 2015, 26, 30-39.	3.8	48
23	Rapid catalytic degradation of refractory textile dyes in Fe(II)/chlorine system at near neutral pH: Radical mechanism involving chlorine radical anion (Cl ^{2•-})-mediated transformation pathways and impact of environmental matrices. <i>Separation and Purification Technology</i> , 2019, 227, 115685.	3.9	48
24	H ₂ O ₂ /periodate (IO ₄ ⁻): a novel advanced oxidation technology for the degradation of refractory organic pollutants. <i>Environmental Science: Water Research and Technology</i> , 2019, 5, 1113-1123.	1.2	43
25	Simulation of hydrogen absorption/desorption on metal hydride LaNi ₅ -H ₂ : Mass and heat transfer. <i>Applied Thermal Engineering</i> , 2018, 142, 110-117.	3.0	41
26	How do dissolved gases affect the sonochemical process of hydrogen production? An overview of thermodynamic and mechanistic effects “ On the “hot spot theory” • <i>Ultrasonics Sonochemistry</i> , 2021, 72, 105422.	3.8	40
27	Sonolytic degradation of naphthol blue black at 1700 kHz: Effects of salts, complex matrices and persulfate. <i>Journal of Water Process Engineering</i> , 2016, 9, 67-77.	2.6	31
28	Influence of processing conditions on the synergism between UV irradiation and chlorine toward the degradation of refractory organic pollutants in UV/chlorine advanced oxidation system. <i>Science of the Total Environment</i> , 2020, 736, 139623.	3.9	31
29	A comprehensive numerical analysis of heat and mass transfer phenomenons during cavitation sono-process. <i>Ultrasonics Sonochemistry</i> , 2021, 73, 105498.	3.8	30
30	Theoretical Procedure for the Characterization of Acoustic Cavitation Bubbles. <i>Acta Acustica United With Acustica</i> , 2014, 100, 823-833.	0.8	29
31	Optimization and prediction of safranin-O cationic dye removal from aqueous solution by emulsion liquid membrane (ELM) using artificial neural network-particle swarm optimization (ANN-PSO) hybrid model and response surface methodology (RSM). <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105837.	3.3	29
32	New aspect of the effect of liquid temperature on sonochemical degradation of nonvolatile organic pollutants in aqueous media. <i>Separation and Purification Technology</i> , 2018, 200, 68-74.	3.9	27
33	Sonochemical degradation of basic fuchsin in water. <i>Desalination and Water Treatment</i> , 2016, 57, 27314-27330.	1.0	24
34	Theoretical investigation of the effect of ambient pressure on bubble sonochemistry: Special focus on hydrogen and reactive radicals production. <i>Chemical Physics</i> , 2021, 547, 111171.	0.9	24
35	The performance of hydrogen desorption from a metal hydride with heat supply by a phase change material incorporated in porous media (metal foam): Heat and mass transfer assessment. <i>Journal of Energy Storage</i> , 2022, 51, 104449.	3.9	24
36	Influence of mineral water constituents, organic matter and water matrices on the performance of the H ₂ O ₂ /IO ₄ ⁻ -advanced oxidation process. <i>Environmental Science: Water Research and Technology</i> , 2019, 5, 1985-1992.	1.2	23

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37	Effect of carbon tetrachloride (CCl ₄) sonochemistry on the size of active bubbles for the production of reactive oxygen and chlorine species in acoustic cavitation field. <i>Chemical Engineering Journal</i> , 2021, 426, 130251.	6.6	23
38	Insight into the impact of excluding mass transport, heat exchange and chemical reactions heat on the sonochemical bubble yield: Bubble size-dependency. <i>Ultrasonics Sonochemistry</i> , 2021, 73, 105511.	3.8	22
39	A complete analysis of the effects of transfer phenomenons and reaction heats on sono-hydrogen production from reacting bubbles: Impact of ambient bubble size. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 18767-18779.	3.8	21
40	Heat and mass transfer characteristics of charging in a metal hydride-phase change material reactor with nano oxide additives: The large scale-approach. <i>Applied Thermal Engineering</i> , 2022, 213, 118622.	3.0	21
41	Ultrasonic Destruction of Acid Orange 7: Effect of Humic Acid, Surfactants and Complex Matrices. <i>Water Environment Research</i> , 2017, 89, 250-259.	1.3	19
42	Sonolytic ozonation for water treatment: efficiency, recent developments, and challenges. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2019, 18, 98-108.	3.2	19
43	Carbon tetrachloride (CCl ₄) sonochemistry: A comprehensive mechanistic and kinetics analysis elucidating how CCl ₄ pyrolysis improves the sonolytic degradation of nonvolatile organic contaminants. <i>Separation and Purification Technology</i> , 2021, 275, 118614.	3.9	19
44	Numerical investigation of heat and mass transfer during hydrogen desorption in a large-scale metal hydride reactor coupled to a phase change material with nano-oxide additives. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 14611-14627.	3.8	19
45	Enhanced sonolytic mineralization of basic red 29 in water by integrated ultrasound/Fe ²⁺ /TiO ₂ treatment. <i>Research on Chemical Intermediates</i> , 2017, 43, 1709-1722.	1.3	18
46	Intensification of light green SF yellowish (LGSFY) photodegradation in water by iodate ions: Iodine radicals implication in the degradation process and impacts of water matrix components. <i>Science of the Total Environment</i> , 2019, 652, 1219-1227.	3.9	18
47	Development of a free radical-based kinetics model for the oxidative degradation of chlorazol black in aqueous solution using periodate photoactivated process. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2021, 408, 113102.	2.0	18
48	An alternative technique for determining the number density of acoustic cavitation bubbles in sonochemical reactors. <i>Ultrasonics Sonochemistry</i> , 2022, 82, 105872.	3.8	18
49	Depth effect on the inertial collapse of cavitation bubble under ultrasound: Special emphasis on the role of the wave attenuation. <i>Ultrasonics Sonochemistry</i> , 2018, 48, 136-150.	3.8	17
50	Toward understanding the mechanism of pure CO ₂ quenching sonochemical processes. <i>Journal of Chemical Technology and Biotechnology</i> , 2020, 95, 553-566.	1.6	17
51	Correlations Between the Sonochemical Production Rate of Hydrogen and the Maximum Temperature and Pressure Reached in Acoustic Bubbles. <i>Arabian Journal for Science and Engineering</i> , 2018, 43, 6109-6117.	1.7	16
52	Modeling of Textile Dye Removal from Wastewater Using Innovative Oxidation Technologies (Fe(II)/Chlorine and H ₂ O ₂ /Periodate Processes): Artificial Neural Network-Particle Swarm Optimization Hybrid Model. <i>ACS Omega</i> , 2022, 7, 13818-13825.	1.6	16
53	UV-photolysis of Chlorazol Black in aqueous media: Process intensification using acetone and evidence of methyl radical implication in the degradation process. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2019, 368, 268-275.	2.0	15
54	Ultrasound/chlorine sono-hybrid-advanced oxidation process: Impact of dissolved organic matter and mineral constituents. <i>Ultrasonics Sonochemistry</i> , 2022, 83, 105918.	3.8	15

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55	Thermodynamics and kinetics analysis of hydrogen absorption in large-scale metal hydride reactor coupled to phase change material-metal foam-based latent heat storage system. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 27617-27632.	3.8	15
56	Probing the radical chemistry and the reaction zone during the sono-degradation of endocrine disruptor 2-phenoxyethanol in water. <i>Ultrasonics Sonochemistry</i> , 2018, 41, 521-526.	3.8	14
57	Liquid depth effect on the acoustic generation of hydroxyl radical for large scale sonochemical reactors. <i>Separation and Purification Technology</i> , 2018, 206, 118-130.	3.9	12
58	Modeling of ultrasonic cavitation as an advanced technique for water treatment. <i>Desalination and Water Treatment</i> , 2015, 56, 1465-1475.	1.0	11
59	Sonochemical degradation of Basic Red 29 in aqueous media. <i>Turkish Journal of Chemistry</i> , 2017, 41, 99-115.	0.5	11
60	Characterization and application of a 1700-kHz acoustic cavitation field for water decontamination: a case study with toluidine blue. <i>Applied Water Science</i> , 2018, 8, 1.	2.8	11
61	Using photoactivated acetone for the degradation of Chlorazol Black in aqueous solutions: Impact of mineral and organic additives. <i>Science of the Total Environment</i> , 2019, 653, 833-838.	3.9	11
62	Methanol sono-pyrolysis for hydrogen recovery: Effect of methanol concentration under an argon atmosphere. <i>Chemical Engineering Journal</i> , 2022, 433, 133272.	6.6	11
63	Acoustic cavitation in 1-butyl-3-methylimidazolium bis(trifluoromethyl-sulfonyl)imide based ionic liquid. <i>Ultrasonics Sonochemistry</i> , 2018, 41, 143-155.	3.8	10
64	Degradation of Safranin O by thermally activated persulfate in the presence of mineral and organic additives: impact of environmental matrices. , 0, 75, 202-212.		10
65	Sonochemical and photSonochemical degradation of endocrine disruptor 2-phenoxyethanol in aqueous media. <i>Separation and Purification Technology</i> , 2018, 206, 356-364.	3.9	9
66	Impact of seawater salinity on the sonochemical removal of emerging organic pollutants. <i>Environmental Technology (United Kingdom)</i> , 2020, 41, 2305-2313.	1.2	9
67	The multiple role of inorganic and organic additives in the degradation of reactive green 12 by UV/chlorine advanced oxidation process. <i>Environmental Technology (United Kingdom)</i> , 2022, 43, 835-847.	1.2	9
68	Fe(III)-catalyzed degradation of persistent textile dyes by chlorine at slightly acidic conditions: the crucial role of Cl [•] radical in the degradation process and impacts of mineral and organic competitors. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2021, 16, .	0.8	9
69	Sonochemical Treatment of Textile Wastewater. <i>Environmental Chemistry for A Sustainable World</i> , 2021, , 147-187.	0.3	9
70	Optimum Bubble Temperature for the Production of Hydroxyl Radical in Acoustic Cavitation – Frequency Dependence. <i>Acta Acustica United With Acustica</i> , 2015, 101, 684-689.	0.8	8
71	Synergy between solar photocatalysis and high frequency sonolysis toward the degradation of organic pollutants in aqueous phase - case of phenol. , 0, 62, 457-464.		8
72	Degradation of C.I. Acid Blue 25 in water using UV/K ₂ S ₂ O ₈ process: effect of salts and environmental matrix. , 0, 74, 395-401.		8

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73	Impact of dissolved rare gases (Ar, Xe and He) on single-bubble sonochemistry in the presence of carbon tetrachloride. <i>Chemical Papers</i> , 2022, 76, 3011-3030.	1.0	8
74	Relationship between liquid depth and the acoustic generation of hydrogen: design aspect for large cavitation reactors with special focus on the role of the wave attenuation. <i>International Journal of Green Energy</i> , 2019, 16, 423-434.	2.1	7
75	Liquid compressibility effect on the acoustic generation of free radicals. <i>Journal of Applied Water Engineering and Research</i> , 2020, 8, 247-261.	1.0	7
76	Removal of persistent textile dyes from wastewater by Fe($\text{H}_2\text{O}_2/\text{H}_3\text{NOH}^+$) integrated system: process performance and limitations. <i>Environmental Science Advances</i> , 2022, 1, 192-207.	1.0	7
77	Sonochemical degradation of endocrine disruptor propylparaben in pure water, natural water, and seawater. <i>Desalination and Water Treatment</i> , 0, , 1-11.	1.0	6
78	The Sonochemical Approach for Hydrogen Production. <i>Nanotechnology in the Life Sciences</i> , 2020, , 1-29.	0.4	6
79	The role of reactive chlorine species and hydroxyl radical in the ultrafast removal of Safranin O from wastewater by CCl_4 /ultrasound sono-process. <i>Chemical Engineering and Processing: Process Intensification</i> , 2022, 178, 109014.	1.8	5
80	A full mechanistic and kinetics analysis of carbon tetrachloride (CCl_4) sono-conversion: Liquid temperature effect. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 106555.	3.3	4
81	Clean hydrogen production by ultrasound (sonochemistry): The effect of noble gases. <i>Current Research in Green and Sustainable Chemistry</i> , 2022, 5, 100288.	2.9	4
82	Ascorbic Acid Solubility and Thermodynamic Characteristics in Several Neat Solvents with Temperatures Ranging from 293 to 313 ÅK. <i>International Journal of Thermophysics</i> , 2022, 43, .	1.0	4
83	Acetone photoactivated process: application to the degradation of refractory organic pollutants in very saline waters. <i>Water and Environment Journal</i> , 2020, 34, 87-94.	1.0	2
84	Numerical insight into the sonolytic ozonation applied for water treatment. , 2021, , 1-23.		2
85	On the sonochemical production of nitrite and nitrate in water: A computational study. , 2021, , 429-452.		2
86	Numerical simulation of acoustic cavitation and its chemical effect in seawater: toward understanding the multiple role of salinity in the sonochemical degradation of organic pollutants. , 2021, , 63-85.		2
87	Protonated Hydroxylamine-Assisted Iron Catalytic Activation of Persulfate for the Rapid Removal of Persistent Organics from Wastewater. <i>Clean - Soil, Air, Water</i> , 2023, 51, .	0.7	2
88	Synergy of combining megahertz ultrasound frequency and heat-activated persulfate for wastewater decontamination: micromodeling of acoustic cavitation and its role in the sono-hybrid process. , 2021, , 405-427.		1
89	Sonophotocatalytic degradation of refractory textile dyes. , 2021, , 111-140.		1
90	Computer simulation of N_2O /argon gas mixture effect on the acoustic generation of hydroxyl radicals in water: toward understanding the mechanism of N_2O inhibited/improved-sonochemical processes. , 2021, , 87-114.		0

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91	The manifold role of heavy metal ions (Cu(II), Cd(II), and Zn(II)) in the solar photocatalytic and sonophotocatalytic treatment of water containing phenol. , 2021, , 467-485.		0
92	Numerical insight into the liquid compressibility effect on the sonochemical activity of acoustic bubbles. , 2021, , 453-474.		0