

Maria Cornelia Iliuta

List of Publications by Year in descending order

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76
papers

2,851
citations

159585

30
h-index

189892

50
g-index

76
all docs

76
docs citations

76
times ranked

2397
citing authors

#	ARTICLE	IF	CITATIONS
1	High temperature CO ₂ sorbents and their application for hydrogen production by sorption enhanced steam reforming process. <i>Chemical Engineering Journal</i> , 2016, 283, 420-444.	12.7	263
2	Wetting phenomenon in membrane contactors – Causes and prevention. <i>Journal of Membrane Science</i> , 2014, 452, 332-353.	8.2	232
3	Sterically Hindered Amine-Based Absorbents for the Removal of CO ₂ from Gas Streams. <i>Journal of Chemical & Engineering Data</i> , 2012, 57, 635-669.	1.9	122
4	Development of Zirconium-Stabilized Calcium Oxide Absorbent for Cyclic High-Temperature CO ₂ Capture. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 10390-10398.	3.7	99
5	Metal oxide-stabilized calcium oxide CO ₂ sorbent for multicycle operation. <i>Chemical Engineering Journal</i> , 2013, 232, 280-289.	12.7	91
6	Photocatalytic valorization of glycerol to hydrogen: Optimization of operating parameters by artificial neural network. <i>Applied Catalysis B: Environmental</i> , 2017, 209, 483-492.	20.2	91
7	Potential and challenges of bioenergy with carbon capture and storage as a carbon-negative energy source: A review. <i>Biomass and Bioenergy</i> , 2021, 146, 105968.	5.7	86
8	Hydrogen production by glycerol steam reforming catalyzed by Ni-promoted Fe/Mg-bearing metallurgical wastes. <i>Applied Catalysis B: Environmental</i> , 2017, 219, 183-193.	20.2	80
9	Development of Al-stabilized CaO–nickel hybrid sorbent–catalyst for sorption-enhanced steam methane reforming. <i>Chemical Engineering Science</i> , 2014, 109, 212-219.	3.8	67
10	CO ₂ Absorption in Aqueous Piperazine Solutions: Experimental Study and Modeling. <i>Journal of Chemical & Engineering Data</i> , 2011, 56, 1547-1554.	1.9	66
11	Sorption-enhanced dimethyl ether synthesis – Multiscale reactor modeling. <i>Chemical Engineering Science</i> , 2011, 66, 2241-2251.	3.8	66
12	A novel synthesis of NiAl ₂ O ₄ spinel from a Ni-Al mixed-metal alkoxide as a highly efficient catalyst for hydrogen production by glycerol steam reforming. <i>Applied Catalysis B: Environmental</i> , 2020, 265, 118535.	20.2	60
13	Hydrogen Production by Sorption-Enhanced Steam Glycerol Reforming: Sorption Kinetics and Reactor Simulation. <i>AIChE Journal</i> , 2013, 59, 2105-2118.	3.6	59
14	Methane Nonoxidative Aromatization over Ru ⁰ /Mo/HZSM-5 in a Membrane Catalytic Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 2371-2378.	3.7	54
15	Limestone Acidification Using Citric Acid Coupled with Two-Step Calcination for Improving the CO ₂ Sorbent Activity. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 7002-7013.	3.7	54
16	Methane Nonoxidative Aromatization over Ru ⁰ /Mo/HZSM-5 at Temperatures up to 973 K in a Palladium ⁰ /Silver/Stainless Steel Membrane Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2003, 42, 323-330.	3.7	48
17	Hydrogen production by sorption-enhanced steam methane reforming process using CaO-Zr/Ni bifunctional sorbent–catalyst. <i>Chemical Engineering and Processing: Process Intensification</i> , 2014, 86, 96-103.	3.6	48
18	Solubility of Total Reduced Sulfurs (Hydrogen Sulfide, Methyl Mercaptan, Dimethyl Sulfide, and) Tj ETQq0 0 0 rgBT /Qverlock 10 Tf 50 62	1.9	44

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19	Analysis of regeneration of sterically hindered alkanolamines aqueous solutions with and without activator. <i>Chemical Engineering Science</i> , 2010, 65, 4746-4750.	3.8	44
20	Efficient approaches to overcome challenges in material development for conventional and intensified CO ₂ catalytic hydrogenation to CO, methanol, and DME. <i>Applied Catalysis A: General</i> , 2021, 617, 118119.	4.3	44
21	Analysis of Laplace-Young equation parameters and their influence on efficient CO ₂ capture in membrane contactors. <i>Separation and Purification Technology</i> , 2013, 118, 806-815.	7.9	43
22	CO ₂ removal by single and mixed amines in a hollow fiber membrane module investigation of contactor performance. <i>AIChE Journal</i> , 2015, 61, 955-971.	3.6	43
23	Sustainable Production of High-Purity Hydrogen by Sorption Enhanced Steam Reforming of Glycerol over CeO ₂ -Promoted Ca ₉ Al ₆ O ₁₈ CaO/NiO Bifunctional Material. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 9774-9786.	6.7	42
24	Absorption of CO ₂ by AHPD-Pz aqueous blend in PTFE hollow fiber membrane contactors. <i>Separation and Purification Technology</i> , 2014, 138, 84-91.	7.9	39
25	Stability of aqueous amine solutions to thermal and oxidative degradation in the absence and the presence of CO ₂ . <i>International Journal of Greenhouse Gas Control</i> , 2014, 29, 16-21.	4.6	37
26	Development of residue coal fly ash supported nickel catalyst for H ₂ production via glycerol steam reforming. <i>Applied Catalysis B: Environmental</i> , 2021, 291, 119958.	20.2	37
27	Acceleration of the reaction of carbon dioxide into aqueous 2-amino-2-hydroxymethyl-1,3-propanediol solutions by piperazine addition. <i>Chemical Engineering Science</i> , 2009, 64, 2011-2019.	3.8	33
28	Investigation of CO ₂ removal by immobilized carbonic anhydrase enzyme in a hollow fiber membrane bioreactor. <i>AIChE Journal</i> , 2017, 63, 2996-3007.	3.6	33
29	Kinetic study of the effects of pH on the photocatalytic hydrogen production from alcohols. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 32030-32041.	7.1	32
30	Recent advancements in carbonic anhydrase immobilization and its implementation in CO ₂ capture technologies: A review. <i>Separation and Purification Technology</i> , 2022, 296, 121299.	7.9	32
31	Flat sheet membrane contactor (FSMC) for CO ₂ separation using aqueous amine solutions. <i>Chemical Engineering Science</i> , 2015, 123, 255-264.	3.8	31
32	Effects of Carbon Nanotube and Carbon Sphere Templates in TiO ₂ Composites for Photocatalytic Hydrogen Production. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 2770-2783.	3.7	30
33	Kinetics of Methane Nonoxidative Aromatization over Ru [~] Mo/HZSM-5 Catalyst. <i>Industrial & Engineering Chemistry Research</i> , 2003, 42, 3203-3209.	3.7	29
34	Current Developments and Future Trends in Photocatalytic Glycerol Valorization: Photocatalyst Development. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 22330-22352.	3.7	28
35	Hydrophilic zeolite sorbents for <i>In situ</i> water removal in high temperature processes. <i>Canadian Journal of Chemical Engineering</i> , 2017, 95, 1842-1849.	1.7	27
36	Selective photocatalytic oxidation of cyclohexanol to cyclohexanone: A spectroscopic and kinetic study. <i>Chemical Engineering Journal</i> , 2020, 382, 122732.	12.7	27

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37	Current developments and future trends in photocatalytic glycerol valorization: process analysis. <i>Reaction Chemistry and Engineering</i> , 2021, 6, 197-219.	3.7	26
38	Influence of steam addition during carbonation or calcination on the CO ₂ capture performance of Ca ₉ Al ₆ O ₁₈ CaO sorbent. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 36, 1062-1069.	4.4	24
39	Enzyme-immobilized flat-sheet membrane contactor for green carbon capture. <i>Chemical Engineering Journal</i> , 2021, 421, 129587.	12.7	24
40	Enzymatic CO ₂ capture by immobilized hCA II in an intensified microreactor—Kinetic study of the catalytic hydration. <i>International Journal of Greenhouse Gas Control</i> , 2013, 15, 78-85.	4.6	22
41	Highly hydrophobic microporous low-density polyethylene hollow fiber membranes by melt-extrusion coupled with salt-leaching technique. <i>Polymers for Advanced Technologies</i> , 2013, 24, 584-592.	3.2	22
42	A comparative study on the performance of M (Rh, Ru, Ni)-promoted metallurgical waste driven catalysts for H ₂ production by glycerol steam reforming. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 32017-32035.	7.1	22
43	Ni-based catalysts supported on acid/alkali-activated coal fly ash residue for improved glycerol steam reforming. <i>Applied Catalysis B: Environmental</i> , 2022, 301, 120791.	20.2	22
44	Enzymatic CO ₂ capture in countercurrent packed-bed column reactors with high performance random packings. <i>International Journal of Greenhouse Gas Control</i> , 2017, 63, 462-474.	4.6	21
45	Development of a Fe/Mg-bearing metallurgical waste stabilized-CaO/NiO hybrid sorbent-catalyst for high purity H ₂ production through sorption-enhanced glycerol steam reforming. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 18452-18465.	7.1	21
46	An intrinsic kinetic model for liquid-phase photocatalytic hydrogen production. <i>AIChE Journal</i> , 2019, 65, e16724.	3.6	20
47	A closer look on the development and commercialization of membrane contactors for mass transfer and separation processes. <i>Separation and Purification Technology</i> , 2019, 227, 115679.	7.9	20
48	Valorization of Coal Fly Ash as a Stabilizer for the Development of Ni/CaO-Based Bifunctional Material. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 3885-3895.	6.7	20
49	Integrated aqueous-phase glycerol reforming to dimethyl ether synthesis—A novel allothermal dual bed membrane reactor concept. <i>Chemical Engineering Journal</i> , 2012, 187, 311-327.	12.7	19
50	Embedding Ni in Al Mixed-Metal Alkoxide for the Synthesis of Efficient Coking Resistant Ni-CaO-Based Catalyst-Sorbent Bifunctional Materials for Sorption-Enhanced Steam Reforming of Glycerol. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 16746-16756.	6.7	19
51	Morphological, chemical and thermal stability of microporous LDPE hollow fiber membranes in contact with single and mixed amine based CO ₂ absorbents. <i>Separation and Purification Technology</i> , 2012, 96, 117-123.	7.9	18
52	Catalytic CO ₂ hydration by immobilized and free human carbonic anhydrase II in a laminar flow microreactor—Model and simulations. <i>Separation and Purification Technology</i> , 2013, 107, 61-69.	7.9	18
53	Solubility of CO ₂ in and Density, Viscosity, and Surface Tension of Aqueous 2-Amino-1,3-propanediol (Serinol) Solutions. <i>Journal of Chemical & Engineering Data</i> , 2014, 59, 355-361.	1.9	17
54	Ni-Fe catalyst derived from mixed oxides Fe/Mg-bearing metallurgical waste for hydrogen production by steam reforming of biodiesel by-product: Investigation of catalyst synthesis parameters and temperature dependency of the reaction network. <i>Applied Catalysis B: Environmental</i> , 2020, 279, 119330.	20.2	17

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55	CO ₂ Sorbents for Sorption-Enhanced Steam Reforming. <i>Advances in Chemical Engineering</i> , 2017, 51, 97-205.	0.9	16
56	Enhanced enzyme-based CO ₂ capture in countercurrent packed-bed column reactors. <i>Separation and Purification Technology</i> , 2020, 248, 116908.	7.9	16
57	Kinetic study of glycerol steam reforming catalyzed by a Ni-promoted metallurgical residue. <i>Chemical Engineering Journal</i> , 2022, 429, 132278.	12.7	15
58	Gas-liquid Partition Coefficients and Henry's Law Constants of DMS in Aqueous Solutions of Fe(II) Chelate Complexes Using the Static Headspace Method. <i>Journal of Chemical & Engineering Data</i> , 2005, 50, 1700-1705.	1.9	14
59	Intensified phenol and p-cresol biodegradation for wastewater treatment in countercurrent packed-bed column bioreactors. <i>Chemosphere</i> , 2022, 286, 131716.	8.2	14
60	Hybrid enzymatic CO ₂ capture process in intensified flat sheet membrane contactors with immobilized carbonic anhydrase. <i>Separation and Purification Technology</i> , 2022, 287, 120505.	7.9	14
61	Noncovalent Immobilization of Optimized Bacterial Cytochrome P450 BM3 on Functionalized Magnetic Nanoparticles. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 10981-10989.	3.7	13
62	Trends and advances in the development of coal fly ash-based materials for application in hydrogen-rich gas production: A review. <i>Journal of Energy Chemistry</i> , 2022, 73, 485-512.	12.9	13
63	CO ₂ Removal in Packed-Bed Columns and Hollow-Fiber Membrane Reactors. Investigation of Reactor Performance. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 12455-12465.	3.7	12
64	Mineralogical Transformations of Heated Serpentine and Their Impact on Dissolution during Aqueous-Phase Mineral Carbonation Reaction in Flue Gas Conditions. <i>Minerals (Basel, Switzerland)</i> , 2019, 9, 680.	2.0	11
65	Biosyngas Production in an Integrated Aqueous-Phase Glycerol Reforming/Chemical Looping Combustion Process. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 16142-16161.	3.7	10
66	Techno-economic assessment of CO ₂ capture from aluminum smelter emissions using PZ activated AMP solutions. <i>Canadian Journal of Chemical Engineering</i> , 2016, 94, 761-770.	1.7	10
67	Impact of particle size in serpentine thermal treatment: Implications for serpentine dissolution in aqueous-phase using CO ₂ in flue gas conditions. <i>Applied Clay Science</i> , 2019, 182, 105286.	5.2	10
68	Selective adsorption of water vapor in the presence of carbon dioxide on hydrophilic zeolites at high temperatures. <i>Separation and Purification Technology</i> , 2022, 282, 120008.	7.9	10
69	Photocatalytic conversion of alcohols to hydrogen and carbon-containing products: A cleaner alcohol valorization approach. <i>Journal of Cleaner Production</i> , 2021, 318, 128546.	9.3	9
70	Effect of impurities on glycerol steam reforming over Ni-promoted metallurgical waste driven catalyst. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 4614-4630.	7.1	9
71	Solubility of Oxygen in Aqueous Solutions of Fe(III) Complexes of trans-1,2-Cyclohexanediaminetetraacetic Acid (CDTA) as a Function of Temperature and Chelate Concentration. <i>Journal of Chemical & Engineering Data</i> , 2004, 49, 1691-1696.	1.9	8
72	Enzymatic Fatty Acid Hydroxylation in a Liquid-Liquid Slug Flow Microreactor. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 7787-7799.	3.7	5

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73	Covalent immobilization of cytochrome P450 BM3 (R966D/W1046S) on glutaraldehyde activated SPIONs. Canadian Journal of Chemical Engineering, 2018, 96, 2227-2235.	1.7	5
74	Kinetics of Enzymatic Hydroxylation by Free and MNPs-Immobilized NADH-Dependent Cytochrome P450 BM3 from <i>Bacillus megaterium</i> . Industrial & Engineering Chemistry Research, 2019, 58, 808-815.	3.7	2
75	Application of industrial solid wastes in catalyst and chemical sorbent development for hydrogen/syngas production by conventional and intensified steam reforming. , 2020, , 21-55.		2
76	Aqueous 2-amino-2-hydroxymethyl-1,3-propanediol as Potential Carbon Dioxide Capture Solutions. , 2006, , .		0