Davood Iranshahi

List of Publications by Year
in descending order

82	1,600	331259 21	360668 35
papers	citations	h-index	g-index

83	83	83	1138
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Progress in catalytic naphtha reforming process: A review. Applied Energy, 2013, 109, 79-93.	5.1	191
2	Assessment and comparison of different catalytic coupling exothermic and endothermic reactions: A review. Applied Energy, 2012, 99, 496-512.	5.1	108
3	Hydrogen production: Perspectives, separation with special emphasis on kinetics of WGS reaction: A state-of-the-art review. Journal of Industrial and Engineering Chemistry, 2017, 49, 1-25.	2.9	92
4	Modeling of naphtha reforming unit applying detailed description of kinetic in continuous catalytic regeneration process. Chemical Engineering Research and Design, 2014, 92, 1704-1727.	2.7	45
5	A novel dynamic radial-flow, spherical-bed reactor concept for naphtha reforming in the presence of catalyst deactivation. International Journal of Hydrogen Energy, 2010, 35, 6261-6275.	3.8	41
6	Dynamic optimization of a multi-stage spherical, radial flow reactor for the naphtha reforming process in the presence of catalyst deactivation using differential evolution (DE) method. International Journal of Hydrogen Energy, 2010, 35, 7498-7511.	3.8	40
7	Mathematical modeling of a multi-stage naphtha reforming process using novel thermally coupled recuperative reactors to enhance aromatic production. International Journal of Hydrogen Energy, 2010, 35, 10984-10993.	3.8	40
8	A review on the design and development of photocatalyst synthesis and application in microfluidic reactors: challenges and opportunities. Reviews in Chemical Engineering, 2020, 36, 687-722.	2.3	38
9	Graft copolymerization of zwitterionic monomer on the polyethersulfone membrane surface by corona air plasma for separation of oily wastewater. Separation and Purification Technology, 2021, 258, 117939.	3.9	37
10	Utilizing differential evolution (DE) technique to optimize operating conditions of an integrated thermally coupled direct DME synthesis reactor. Chemical Engineering Journal, 2011, 168, 321-332.	6.6	35
11	Modeling of an axial flow, spherical packed-bed reactor for naphtha reforming process in the presence of the catalyst deactivation. International Journal of Hydrogen Energy, 2010, 35, 12784-12799.	3.8	34
12	Improving thermal efficiency and increasing production rate in the double moving beds thermally coupled reactors by using differential evolution (DE) technique. Applied Thermal Engineering, 2016, 94, 543-558.	3.0	34
13	Multi-objective optimisation of steam methane reforming considering stoichiometric ratio indicator for methanol production. Journal of Cleaner Production, 2018, 180, 655-665.	4.6	34
14	The aromatic enhancement in the axialâ€flow spherical packedâ€bed membrane naphtha reformers in the presence of catalyst deactivation. AICHE Journal, 2011, 57, 3182-3198.	1.8	28
15	A comparison of two different flow types on performance of a thermally coupled recuperative reactor containing naphtha reforming process and hydrogenation of nitrobenzene. International Journal of Hydrogen Energy, 2011, 36, 3483-3495.	3.8	27
16	Enhancement of hydrogen production via coupling of MCH dehydrogenation reaction and methanol synthesis process by using thermally coupled heat exchanger reactor. International Journal of Hydrogen Energy, 2011, 36, 3371-3383.	3.8	27
17	A dynamic membrane reactor concept for naphtha reforming, considering radial-flow patterns for both sweeping gas and reacting materials. Chemical Engineering Journal, 2011, 178, 264-275.	6.6	24
18	A novel integrated, thermally coupled fluidized bed configuration for catalytic naphtha reforming to enhance aromatic and hydrogen productions in refineries. International Journal of Hydrogen Energy, 2011, 36, 2979-2991.	3.8	24

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19	A comparative study between Modified Data Envelopment Analysis and Response Surface Methodology for optimisation of heterogeneous biodiesel production from waste cooking palm oil. Journal of Cleaner Production, 2016, 136, 23-30.	4.6	24
20	Reducing environmental problems and increasing saving energy by proposing new configuration for moving bed thermally coupled reactors. Journal of Natural Gas Science and Engineering, 2014, 17, 136-150.	2.1	23
21	A comparative study on a novel combination of spherical and membrane tubular reactors of the catalytic naphtha reforming process. International Journal of Hydrogen Energy, 2011, 36, 505-517.	3.8	22
22	Utilizing DE optimization approach to boost hydrogen and octane number in a novel radial-flow assisted membrane naphtha reactor. Chemical Engineering Science, 2012, 68, 236-249.	1.9	22
23	Optimal design of a radial-flow membrane reactor as a novel configuration for continuous catalytic regenerative naphtha reforming process considering a detailed kinetic model. International Journal of Hydrogen Energy, 2013, 38, 8384-8399.	3.8	21
24	Theoretical investigation of aromatics production enhancement in thermal coupling of naphtha reforming and hydrodealkylation of toluene. Chemical Engineering and Processing: Process Intensification, 2011, 50, 893-903.	1.8	20
25	Differential Evolution Strategy for Optimization of Hydrogen Production via Coupling of Methylcyclohexane Dehydrogenation Reaction and Methanol Synthesis Process in a Thermally Coupled Double Membrane Reactor. Industrial & Engineering Chemistry Research, 2013, 52, 1508-1522.	1.8	20
26	A novel dynamic membrane reactor concept with radialâ€flow pattern for reacting material and axialâ€flow pattern for sweeping gas in catalytic naphtha reformers. AICHE Journal, 2012, 58, 1230-1247.	1.8	19
27	Applying new kinetic and deactivation models in simulation of a novel thermally coupled reactor in continuous catalytic regenerative naphtha process. Chemical Engineering Journal, 2013, 229, 153-176.	6.6	19
28	Progress in spherical packed-bed reactors: Opportunities for refineries and chemical industries. Chemical Engineering and Processing: Process Intensification, 2018, 132, 16-24.	1.8	19
29	Methanol synthesis in a novel axial-flow, spherical packed bed reactor in the presence of catalyst deactivation. Chemical Engineering Research and Design, 2011, 89, 2457-2469.	2.7	18
30	Modeling and Simulation of a Novel Membrane Reactor in a Continuous Catalytic Regenerative Naphtha Reformer Accompanied with a Detailed Description of Kinetics. Energy & Fuels, 2013, 27, 4048-4070.	2.5	17
31	Evaluation of Optimum Design Parameters and Operating Conditions of Axial- and Radial-Flow Tubular Naphtha Reforming Reactors, Using the Differential Evolution Method, Considering Catalyst Deactivation. Energy & Fuels, 2011, 25, 762-772.	2.5	16
32	Combining continuous catalytic regenerative naphtha reformer with thermally coupled concept for improving the process yield. International Journal of Hydrogen Energy, 2013, 38, 10327-10344.	3.8	16
33	Development of a detailed reaction network for industrial upgrading of heavy reformates to xylenes using differential evolution technique. Journal of the Taiwan Institute of Chemical Engineers, 2015, 48, 56-72.	2.7	16
34	Multi-objective optimization of thermally coupled reactor of CCR naphtha reforming in presence of SO2 oxidation to boost the gasoline octane number and hydrogen. Fuel, 2017, 206, 580-592.	3.4	16
35	Inherent CO₂ Capture and H₂ Production Enhancement in a New Glycerol Steam Reformer Coupled with Chemical Looping Combustion. Energy & Fuels, 2021, 35, 5049-5063.	2.5	16
36	Utilising a radial flow, spherical packed-bed reactor for auto thermal steam reforming of methane to achieve a high capacity of H2 production. Chemical Engineering and Processing: Process Intensification, 2017, 120, 258-267.	1.8	15

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37	Thermal Integration of Sulfuric Acid and Continuous Catalyst Regeneration of Naphtha Reforming Plants. Chemical Engineering and Technology, 2018, 41, 637-655.	0.9	15
38	An investigative study on replacing the conventional furnaces of naphtha reforming with chemical looping combustion for clean hydrogen production. International Journal of Hydrogen Energy, 2020, 45, 19405-19419.	3.8	15
39	Experimental investigation and development of a SVM model for hydrogenation reaction of carbon monoxide in presence of Coâ€“Mo/Al2O3 catalyst. Chemical Engineering Journal, 2015, 276, 213-221.	6.6	14
40	A novel integrated thermally coupled moving bed reactors for naphtha reforming process with hydrodealkylation of toluene. Applied Thermal Engineering, 2017, 112, 1040-1056.	3.0	14
41	Simultaneous hydrogen and aromatics enhancement by obtaining optimum temperature profile and hydrogen removal in naphtha reforming process; a novel theoretical study. International Journal of Hydrogen Energy, 2011, 36, 8316-8326.	3.8	13
42	Enhancement in Research Octane Number and Hydrogen Production via Dynamic Optimization of a Novel Spherical Axial-Flow Membrane Naphtha Reformer. Industrial & Engineering Chemistry Research, 2012, 51, 398-409.	1.8	13
43	Evaluation of maximum gasoline production of Fischerâ€“Tropsch synthesis reactions in GTL technology: A discretized approach. Journal of Natural Gas Science and Engineering, 2012, 9, 209-219.	2.1	13
44	Utilizing DE optimization approach to boost hydrogen and octane number, through a combination of radial-flow spherical and tubular membrane reactors in catalytic naphtha reformers. Fuel, 2013, 111, 1-11.	3.4	13
45	Boosting the gasoline octane number in thermally coupled naphtha reforming heat exchanger reactor using de optimization technique. Fuel, 2012, 97, 109-118.	3.4	12
46	A Novel Chemical Looping Combustion (CLC)-Assisted Catalytic Naphtha Reforming Process for Simultaneous Carbon Dioxide Capture and Hydrogen Production Enhancement. Energy & Fuels, 2015, 29, 2022-2033.	2.5	12
47	Maximization of dimethyl ether production from synthesis gas by obtaining optimum temperature profile and water removal. Fuel, 2017, 190, 386-395.	3.4	12
48	Enhanced BTX Production in Refineries withÂSulfur Dioxide Oxidation by Thermal Integrated Model. Chemical Engineering and Technology, 2018, 41, 1746-1758.	0.9	12
49	A conceptual evaluation of a new multifunctional reactor containing glycerol steam reforming and nitrobenzene hydrogenation. Chemical Engineering and Processing: Process Intensification, 2021, 164, 108405.	1.8	12
50	Enhancement of aromatic production in naphtha reforming process by simultaneous operation of isothermal and adiabatic reactors. International Journal of Hydrogen Energy, 2011, 36, 2076-2085.	3.8	11
51	Simultaneous production and utilization of methanol for methyl formate synthesis in a looped heat exchanger reactor configuration. Journal of Natural Gas Chemistry, 2012, 21, 661-672.	1.8	11
52	A conceptual investigation for the simultaneous production of gasoline and ammonia in thermally coupled reactors. Chemical Engineering and Processing: Process Intensification, 2019, 138, 15-26.	1.8	11
53	Conversion enhancement of heavy reformates into xylenes by optimal design of a novel radial flow packed bed reactor, applying a detailed kinetic model. Chemical Engineering Research and Design, 2015, 95, 317-336.	2.7	10
54	Development of PES-based hydrophilic membranes via corona air plasma for highly effective water purification. Journal of Environmental Chemical Engineering, 2022, 10, 107775.	3.3	10

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55	Incorporating multi-membrane tubes for simultaneous management of H2/HC and hydrogenation of nitrobenzene to aniline in naphtha heat exchanger reactor. Chemical Engineering Journal, 2012, 184, 286-297.	6.6	9
56	Optimization of a novel multifunctional reactor containing m-xylene hydrodealkylation and naphtha reforming. International Journal of Hydrogen Energy, 2019, 44, 21882-21895.	3.8	9
57	Optimal design of a thermally coupled fluidised bed heat exchanger reactor for hydrogen production and octane improvement in the catalytic naphtha reformers. Canadian Journal of Chemical Engineering, 2013, 91, 54-65.	0.9	8
58	Novel Chemical Looping Combustion Assisted Residue Fluid Catalytic Cracking Process in Order To Reduce CO2 Emission and Gasoline Production Enhancement. Energy & Fuels, 2017, 31, 5662-5672.	2.5	8
59	Comparison of co-current and counter-current flow in a bifunctional reactor containing ammonia synthesis and 2-butanol dehydrogenation to MEK. International Journal of Hydrogen Energy, 2019, 44, 2905-2917.	3.8	8
60	Decalin Loop in an Optimized Thermally Coupled Dual Methanol Reactor Using Differential Evolution (DE) Strategy. Energy & Fuels, 2012, 26, 5858-5871.	2.5	7
61	Hydrogen and aromatic production by means ofÂaÂnovel membrane integrated cross flow CCRÂnaphtha reforming process. International Journal of Hydrogen Energy, 2017, 42, 7957-7973.	3.8	7
62	A novel reactor concept for thermal integration of naphtha reforming with propane ammoxidation. Chemical Engineering and Processing: Process Intensification, 2019, 146, 107659.	1.8	7
63	Conceptual comparison of four configurations in the thermal coupling of ammonia synthesis and 2-butanol dehydrogenation. Applied Thermal Engineering, 2019, 154, 238-250.	3.0	7
64	A Novel Radial-Flow, Spherical Packed Bed Reactor for the Hydrocracking Process. Industrial & Engineering Chemistry Research, 2015, 54, 1748-1754.	1.8	6
65	Simultaneous Synthesis and Oxidation of Methanol to Formaldehyde, Thermally Coupled with Cyclohexane Dehydrogenation in a Trifunctional Reactor. Energy & Fuels, 2019, 33, 4487-4498.	2.5	6
66	Analysis of integrated system for ammonia synthesis and methyl formate production in the thermally coupled reactor. Chemical Engineering and Processing: Process Intensification, 2021, 166, 108418.	1.8	6
67	Modeling and optimization of thermally coupled reactors of naphtha reforming and propane ammoxidation with different feed distributions. Reaction Kinetics, Mechanisms and Catalysis, 2020, 129, 315-335.	0.8	5
68	A conceptual comparison between potential configurations in the thermal coupling of naphtha reforming with propane ammoxidation. International Communications in Heat and Mass Transfer, 2020, 112, 104432.	2.9	5
69	Morphological and structural insights into high aspect ratio lauric acid/TiO2 nanowires: A low-temperature synthesis. Ceramics International, 2021, 47, 9424-9436.	2.3	5
70	A low temperature synthesis of Ti/TiO2/Fatty Acid/GOx/ZnO and its evaluation for amoxicillin bio-photo-catalytic degradation. Journal of Molecular Liquids, 2021, 343, 116979.	2.3	5
71	Utilization of cyclohexanol dehydrogenation in a novel thermally coupled reactor for Fischerâ€“Tropsch synthesis in gas to liquid technology. Journal of Natural Gas Science and Engineering, 2012, 9, 138-148.	2.1	4
72	Analysis of the Combined Ammonia Production and Cyclohexane Dehydrogenation by a Novel Bifunctional Reactor. Energy & Fuels, 2019, 33, 6717-6726.	2.5	4

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73	Analysis of combined heat and mass transfer in membrane-assisted thermally coupled reactors containing naphtha reforming and m-xylene hydrodealkylation. Chemical Engineering and Processing: Process Intensification, 2020, 148, 107724.	1.8	4
74	Conceptual comparison of three novel configurations in the spherical radial flow reactor for ammonia production. Fuel, 2022, 321, 123945.	3.4	4
75	The effect of flow direction in a novel bifunctional reactor producing formaldehyde, benzene, and hydrogen simultaneously. International Journal of Hydrogen Energy, 2019, 44, 11887-11900.	3.8	3
76	A new reactor concept for the combined production of ammonia and methyl ethyl ketone. Journal of Flow Chemistry, 2019, 9, 43-57.	1.2	3
77	Simultaneous production of hydrogen and acrylonitrile in a new bifunctional micro-reactor, mathematical modeling and optimization study. Journal of Flow Chemistry, 2021, 11, 265.	1.2	3
78	A comparative study on optimised and nonâ€optimised axial flow, spherical reactors in naphtha reforming process. Canadian Journal of Chemical Engineering, 2012, 90, 1102-1111.	0.9	2
79	Insights on the speed of sound in ionic liquid binary mixtures: Investigation of influential parameters and construction of predictive models. Journal of Molecular Liquids, 2021, 326, 115067.	2.3	2
80	Simulation and energy optimization of a reformate stabilizer unit in a petrochemical plant. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2020, 42, 104-112.	1.2	1
81	Increasing the propylene production in the MTP process through thermal coupling with naphtha reforming process. Chemical Engineering Science, 2022, 255, 117646.	1.9	1
82	The flow direction effect on doubleâ€duty microâ€reactor for coproduction of aniline and hydrogen. Chemical Engineering and Technology, 0, , .	0.9	0