

Amiya K Jana

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

1,285
citations

19
h-index

31
g-index

83
ext. papers

1,575
ext. citations

5.9
avg, IF

5.86
L-index

#	Paper	IF	Citations
81	Microsecond molecular dynamics of methane-carbon dioxide swapping in pure and saline water environment.. <i>Scientific Reports</i> , 2022 , 12, 2634	4.9	
80	Optimal Reflux Splitting Reactive Distillation for Algal Biodiesel Production: Waste Heat Recovery through Vapor Recompression and Organic Rankine Cycle. <i>Separation and Purification Technology</i> , 2022 , 121007	8.3	1
79	Optimizing Algal Biodiesel Production from a Novel Reactive Distillation based Unit: Reducing CO2 Emission and Cost. <i>Chemical Engineering and Processing: Process Intensification</i> , 2022 , 108948	3.7	1
78	A novel vapor recompressed batch extractive distillation: Design and retrofitting. <i>Separation and Purification Technology</i> , 2021 , 260, 118225	8.3	4
77	Silica supported binary metal organic framework for removing organic dye involving combined effect of adsorption followed by photocatalytic degradation. <i>Materials Research Bulletin</i> , 2021 , 138, 111227	5.1	4
76	Physical and molecular insights to Clathrate hydrate thermodynamics. <i>Renewable and Sustainable Energy Reviews</i> , 2021 , 135, 110150	16.2	7
75	A binary MOF of iron and copper for treating ciprofloxacin-contaminated waste water by an integrated technique of adsorption and photocatalytic degradation. <i>New Journal of Chemistry</i> , 2021 , 45, 17196-17210	3.6	2
74	Naturally Occurring Hydrate Formation and Dissociation in Marine Sediment: Experimental Validation. <i>Industrial & Engineering Chemistry Research</i> , 2021 , 60, 1175-1184	3.9	1
73	Nonlinear control of a PEM fuel cell integrated system with water electrolyzer. <i>Chemical Engineering Research and Design</i> , 2021 , 171, 150-167	5.5	2
72	Nano-catalytic heterogeneous reactive distillation for algal biodiesel production: Multi-objective optimization and heat integration. <i>Energy Conversion and Management</i> , 2021 , 241, 114298	10.6	3
71	Structure-H Hydrate of Mixed Gases: Phase Equilibrium Modeling and Experimental Validation. <i>Journal of Molecular Liquids</i> , 2021 , 117605	6	1
70	Microscopic Molecular Insights into Hydrate Formation and Growth in Pure and Saline Water Environments. <i>Journal of Physical Chemistry A</i> , 2020 , 124, 4241-4252	2.8	13
69	Insight into the thermo-physics of gas hydrates: Three phase equilibrium in presence of electrolyte. <i>Journal of Chemical Thermodynamics</i> , 2020 , 150, 106182	2.9	3
68	Multiphase vortex flow patterns in slab caster mould: insights of air vortex interaction and plant data analysis. <i>Canadian Metallurgical Quarterly</i> , 2020 , 59, 270-287	0.9	0
67	Evolutionary Algorithm Based Multiobjective Optimization of Vapor Recompressed Batch Extractive Distillation: Assessing Economic Potential and Environmental Impact. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 5032-5046	3.9	9
66	Insights into the competitive adsorption of pollutants on a mesoporous alumina-silica nano-sorbent synthesized from coal fly ash and a waste aluminium foil.. <i>RSC Advances</i> , 2020 , 10, 15514-15522	3.7	6
65	Nonmonotonous Lattice Distortion Model for Gas Hydrates. <i>Journal of Physical Chemistry A</i> , 2020 , 124, 3149-3156	2.8	6

64	Vertical partition in fractionating tower to configure a novel heat integrated distillation hybridized with vapor recompression. <i>Separation and Purification Technology</i> , 2020 , 235, 116153	8.3	4
63	Mixed-Integer dynamic optimization of conventional and vapor recompressed batch distillation for economic and environmental objectives. <i>Chemical Engineering Research and Design</i> , 2020 , 154, 70-85	5.5	10
62	Clathrate hydrate dynamics with synthetic- and bio-surfactant in porous media: Model formulation and validation. <i>Chemical Engineering Science</i> , 2020 , 213, 115386	4.4	11
61	Gas hydrate dynamics in distributed porous particles with saltwater: Model formulation and experimental validation. <i>Chemical Engineering Journal</i> , 2020 , 392, 123660	14.7	7
60	A novel synthesis of MIL-53(Al)@SiO ₂ : an integrated photocatalyst adsorbent to remove bisphenol a from wastewater. <i>New Journal of Chemistry</i> , 2020 , 44, 18892-18905	3.6	9
59	A Lattice Distortion Theory for Promotor Containing Clathrate Hydrates. <i>Scientific Reports</i> , 2020 , 10, 9622	4.9	2
58	Analysis of Weighting and Selection Methods for Pareto-Optimal Solutions of Multiobjective Optimization in Chemical Engineering Applications. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 14850-14867	3.9	12
57	Carbon Dioxide Hydrate Growth Dynamics and Crystallography in Pure and Saline Water. <i>Crystal Growth and Design</i> , 2020 , 20, 7129-7140	3.5	7
56	Multi-objective optimization of vapor recompressed distillation column in batch processing: Improving energy and cost savings. <i>Applied Thermal Engineering</i> , 2019 , 150, 1273-1296	5.8	12
55	Growth and Decomposition Mechanism of Clathrate Hydrates in the Presence of Porous Media and Seawater: Experimental Validation. <i>Energy & Fuels</i> , 2019 , 33, 1433-1443	4.1	11
54	Techno-economic Feasibility of Reactive Distillation for Biodiesel Production from Algal Oil: Comparing with a Conventional Multiunit System. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 12028-12040	3.9	14
53	A Novel Heat Integrated Extractive Dividing Wall Column for Ethanol Dehydration. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 9109-9117	3.9	19
52	Double-partitioned dividing wall column for a multicomponent azeotropic system. <i>Separation and Purification Technology</i> , 2019 , 219, 33-46	8.3	19
51	Computing Anisotropic Cavity Potential for Clathrate Hydrates. <i>Journal of Physical Chemistry A</i> , 2019 , 123, 2762-2770	2.8	11
50	Vapor recompressed batch distillation: Optimizing reflux ratio at variable mode. <i>Computers and Chemical Engineering</i> , 2019 , 124, 184-196	4	10
49	Performance analysis of a heat integrated column with heat pumping. <i>Separation and Purification Technology</i> , 2019 , 209, 18-25	8.3	14
48	Alumina-silica nano-sorbent from plant fly ash and scrap aluminium foil in removing nickel through adsorption. <i>Powder Technology</i> , 2019 , 354, 792-803	5.2	18
47	Modeling recovery of natural gas from hydrate reservoirs with carbon dioxide sequestration: Validation with Iḃik Sikumi field data. <i>Scientific Reports</i> , 2019 , 9, 18901	4.9	11

46	Vapor recompression with interboiler in a ternary dividing wall column: Improving energy efficiency and savings, and economic performance. <i>Applied Thermal Engineering</i> , 2019 , 147, 1009-1023	5.8	13
45	Optimizing reboiler duty and reflux ratio profiles of vapor recompressed batch distillation. <i>Separation and Purification Technology</i> , 2019 , 213, 553-570	8.3	18
44	Pressure-Swing Dividing Wall Column with Multiple Binary Azeotropes: Improving Energy Efficiency and Cost Savings through Vapor Recompression. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 4019-4032	3.9	20
43	Dynamics and Estimator-Based Nonlinear Control of a PEM Fuel Cell. <i>IEEE Transactions on Control Systems Technology</i> , 2018 , 26, 1124-1131	4.8	13
42	Nonlinear multivariable sliding mode control of a reversible PEM fuel cell integrated system. <i>Energy Conversion and Management</i> , 2018 , 171, 541-565	10.6	37
41	Fundamental of swapping phenomena in naturally occurring gas hydrates. <i>Scientific Reports</i> , 2018 , 8, 16563	4.9	19
40	A Novel Divided-Wall Heat Integrated Distillation Column: Thermodynamic and Economic Feasibility. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 12127-12135	3.9	5
39	Modeling phase equilibrium with a modified Wong-Sandler mixing rule for natural gas hydrates: Experimental validation. <i>Applied Energy</i> , 2017 , 205, 749-760	10.7	24
38	Formulating formation mechanism of natural gas hydrates. <i>Scientific Reports</i> , 2017 , 7, 6392	4.9	16
37	Internally heat integrated batch distillation: Vapor recompression and nonlinear control. <i>Separation and Purification Technology</i> , 2017 , 189, 267-278	8.3	11
36	Multiphase Vortex Flow Patterns in Slab Caster Mold: Experimental Study. <i>ISIJ International</i> , 2017 , 57, 1553-1562	1.7	17
35	Modeling Growth Kinetics of Gas Hydrate in Porous Media: Experimental Validation. <i>Energy & Fuels</i> , 2016 , 30, 7656-7665	4.1	18
34	Dynamic vapor recompression in a reactive batch rectifier: Analysis and nonlinear control. <i>Energy</i> , 2016 , 115, 60-66	7.9	3
33	Dividing wall column: Improving thermal efficiency, energy savings and economic performance. <i>Applied Thermal Engineering</i> , 2016 , 106, 1033-1041	5.8	26
32	A comparative performance of thermodynamic models for a quaternary (H ₂ O ₂ H ₂) H ₂ system: Experimental verification. <i>International Journal of Hydrogen Energy</i> , 2016 , 41, 13350-13358	6.7	1
31	A new divided-wall heat integrated distillation column (HIDiC) for batch processing: Feasibility and analysis. <i>Applied Energy</i> , 2016 , 172, 199-206	10.7	30
30	Dynamic simulation, numerical control and analysis of a novel bottom flashing scheme in batch distillation. <i>Computers and Chemical Engineering</i> , 2016 , 89, 166-171	4	8
29	A novel energy-efficient batch stripper: Thermodynamic feasibility, cost analysis and CO ₂ emissions. <i>Applied Thermal Engineering</i> , 2015 , 84, 292-300	5.8	16

28	Predicting phase equilibrium of a ternary feed to the hydroiodic acid section of SI thermochemical cycle. <i>International Journal of Hydrogen Energy</i> , 2015 , 40, 15381-15388	6.7	2
27	An energy-efficient cost-effective transient batch rectifier with bottom flashing: Process dynamics and control. <i>AIChE Journal</i> , 2015 , 61, 3699-3707	3.6	7
26	Introducing vapor recompression mechanism in heat-integrated distillation column: Impact of internal energy driven intermediate and bottom reboiler. <i>AIChE Journal</i> , 2015 , 61, 118-131	3.6	29
25	Predicting wellbore dynamics in a steam-assisted gravity drainage system: Numeric and semi-analytic model, and validation. <i>Applied Thermal Engineering</i> , 2015 , 91, 679-686	5.8	18
24	Assessing the performance improvement of an intensified heat integration scheme: Reactive pressure-swing distillation. <i>Applied Thermal Engineering</i> , 2015 , 76, 509-520	5.8	19
23	Advances in heat pump assisted distillation column: A review. <i>Energy Conversion and Management</i> , 2014 , 77, 287-297	10.6	85
22	Impact of vapor recompression in batch distillation on energy consumption, cost and CO ₂ emission: Open-loop versus closed-loop operation. <i>Applied Thermal Engineering</i> , 2014 , 62, 365-374	5.8	19
21	A novel multistage vapor recompression reactive distillation system with intermediate reboilers. <i>AIChE Journal</i> , 2013 , 59, 761-771	3.6	50
20	A novel combination of internal and external heat integrations in batch distillation: Application to a reactive system. <i>Applied Thermal Engineering</i> , 2013 , 59, 405-413	5.8	5
19	Improving energy efficiency and cost-effectiveness of batch distillation for separating wide boiling constituents. II: Internal versus external heat integration. <i>Chemical Engineering and Processing: Process Intensification</i> , 2013 , 72, 122-129	3.7	7
18	Reducing total annualized cost and CO ₂ emissions in batch distillation: Dynamics and control. <i>AIChE Journal</i> , 2013 , 59, 2821-2832	3.6	16
17	Differential Geometry-Based Adaptive Nonlinear Control Law: Application to an Industrial Refinery Process. <i>IEEE Transactions on Industrial Informatics</i> , 2013 , 9, 2014-2022	11.9	22
16	Assessment of the implementation of vapor recompression technique in batch distillation. <i>Separation and Purification Technology</i> , 2013 , 107, 1-10	8.3	16
15	Intensified thermal integration in batch reactive distillation. <i>Applied Energy</i> , 2013 , 103, 290-297	10.7	28
14	A novel intensified heat integration in multicomponent distillation. <i>Energy</i> , 2012 , 41, 443-453	7.9	60
13	Improving Energy Efficiency and Cost-Effectiveness of Batch Distillation for Separating Wide Boiling Constituents. 1. Vapor Recompression Column. <i>Industrial & Engineering Chemistry Research</i> , 2012 , 51, 15413-15422	3.9	12
12	Comparative control study of a simulated batch rectifier. <i>Computers and Chemical Engineering</i> , 2012 , 36, 265-272	4	3
11	Performance investigation of a variable speed vapor recompression reactive batch rectifier. <i>AIChE Journal</i> , 2011 , 57, 3238-3242	3.6	27

10	A Hybrid FLC-EKF Scheme for Temperature Control of a Refinery Debutanizer Column. <i>IEEE Transactions on Industrial Informatics</i> , 2010 , 6, 25-35	11.9	13
9	A nonlinear exponential observer for a batch distillation 2010 ,		2
8	Heat integrated distillation operation. <i>Applied Energy</i> , 2010 , 87, 1477-1494	10.7	189
7	Dynamic simulation and nonlinear control of a rigorous batch reactive distillation. <i>ISA Transactions</i> , 2010 , 49, 130-7	5.5	20
6	Nonlinear state estimation and control of a batch reactive distillation. <i>Chemical Engineering Journal</i> , 2009 , 150, 516-526	14.7	19
5	A partially heat integrated reactive distillation: Feasibility and analysis. <i>Separation and Purification Technology</i> , 2009 , 70, 136-139	8.3	30
4	Nonlinear state estimation and control of a refinery debutanizer column. <i>Computers and Chemical Engineering</i> , 2009 , 33, 1484-1490	4	6
3	Nonlinear model-based control algorithm for a distillation column using software sensor. <i>ISA Transactions</i> , 2005 , 44, 259-71	5.5	11
2	Globally linearized control on diabatic continuous stirred tank reactor: a case study. <i>ISA Transactions</i> , 2005 , 44, 423-44	5.5	10
1	Proposing ab initio assisted lattice distortion theory for phase equilibrium: Pure and mixed refrigerant gas hydrates. <i>AIChE Journal</i> , e17463	3.6	0