Amiya K Jana

List of Publications by Year
in descending order

83	1,871	279487 23	329751 37
papers	citations	h-index	g-index

83	83	83	1011
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Heat integrated distillation operation. Applied Energy, 2010, 87, 1477-1494.	5.1	222
2	Advances in heat pump assisted distillation column: A review. Energy Conversion and Management, 2014, 77, 287-297.	4.4	115
3	Nonlinear multivariable sliding mode control of a reversible PEM fuel cell integrated system. Energy Conversion and Management, 2018, 171, 541-565.	4.4	72
4	A novel intensified heat integration in multicomponent distillation. Energy, 2012, 41, 443-453.	4.5	63
5	A novel multistage vapor recompression reactive distillation system with intermediate reboilers. AICHE Journal, 2013, 59, 761-771.	1.8	61
6	Analysis of Weighting and Selection Methods for Pareto-Optimal Solutions of Multiobjective Optimization in Chemical Engineering Applications. Industrial & Engineering Chemistry Research, 2020, 59, 14850-14867.	1.8	54
7	A new divided-wall heat integrated distillation column (HIDiC) for batch processing: Feasibility and analysis. Applied Energy, 2016, 172, 199-206.	5.1	39
8	Dividing wall column: Improving thermal efficiency, energy savings and economic performance. Applied Thermal Engineering, 2016, 106, 1033-1041.	3.0	34
9	Modeling phase equilibrium with a modified Wong-Sandler mixing rule for natural gas hydrates: Experimental validation. Applied Energy, 2017, 205, 749-760.	5.1	33
10	A partially heat integrated reactive distillation: Feasibility and analysis. Separation and Purification Technology, 2009, 70, 136-139.	3.9	32
11	A Novel Heat Integrated Extractive Dividing Wall Column for Ethanol Dehydration. Industrial & Engineering Chemistry Research, 2019, 58, 9109-9117.	1.8	32
12	Introducing vapor recompression mechanism in heatâ€integrated distillation column: Impact of internal energy driven intermediate and bottom reboiler. AICHE Journal, 2015, 61, 118-131.	1.8	30
13	Performance investigation of a variable speed vapor recompression reactive batch rectifier. AICHE Journal, 2011, 57, 3238-3242.	1.8	29
14	Intensified thermal integration in batch reactive distillation. Applied Energy, 2013, 103, 290-297.	5.1	29
15	Modeling Growth Kinetics of Gas Hydrate in Porous Media: Experimental Validation. Energy & Fuels, 2016, 30, 7656-7665.	2.5	28
16	A binary MOF of iron and copper for treating ciprofloxacin-contaminated waste water by an integrated technique of adsorption and photocatalytic degradation. New Journal of Chemistry, 2021, 45, 17196-17210.	1.4	28
17	Alumina-silica nano-sorbent from plant fly ash and scrap aluminium foil in removing nickel through adsorption. Powder Technology, 2019, 354, 792-803.	2.1	27
18	Microscopic Molecular Insights into Hydrate Formation and Growth in Pure and Saline Water Environments. Journal of Physical Chemistry A, 2020, 124, 4241-4252.	1.1	27

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19	Dynamic simulation and nonlinear control of a rigorous batch reactive distillation. ISA Transactions, 2010, 49, 130-137.	3.1	26
20	Differential Geometry-Based Adaptive Nonlinear Control Law: Application to an Industrial Refinery Process. IEEE Transactions on Industrial Informatics, 2013, 9, 2014-2022.	7.2	26
21	Double-partitioned dividing wall column for a multicomponent azeotropic system. Separation and Purification Technology, 2019, 219, 33-46.	3.9	26
22	Pressure-Swing Dividing Wall Column with Multiple Binary Azeotropes: Improving Energy Efficiency and Cost Savings through Vapor Recompression. Industrial & Engineering Chemistry Research, 2018, 57, 4019-4032.	1.8	25
23	Fundamental of swapping phenomena in naturally occurring gas hydrates. Scientific Reports, 2018, 8, 16563.	1.6	25
24	Carbon Dioxide Hydrate Growth Dynamics and Crystallography in Pure and Saline Water. Crystal Growth and Design, 2020, 20, 7129-7140.	1.4	25
25	Formulating formation mechanism of natural gas hydrates. Scientific Reports, 2017, 7, 6392.	1.6	24
26	Optimizing reboiler duty and reflux ratio profiles of vapor recompressed batch distillation. Separation and Purification Technology, 2019, 213, 553-570.	3.9	24
27	Nonlinear state estimation and control of a batch reactive distillation. Chemical Engineering Journal, 2009, 150, 516-526.	6.6	23
28	Assessing the performance improvement of an intensified heat integration scheme: Reactive pressure-swing distillation. Applied Thermal Engineering, 2015, 76, 509-520.	3.0	23
29	Vapor recompression with interreboiler in a ternary dividing wall column: Improving energy efficiency and savings, and economic performance. Applied Thermal Engineering, 2019, 147, 1009-1023.	3.0	23
30	A novel synthesis of MIL-53(Al)@SiO₂: an integrated photocatalyst adsorbent to remove bisphenol a from wastewater. New Journal of Chemistry, 2020, 44, 18892-18905.	1.4	23
31	Reducing total annualized cost and CO₂ emissions in batch distillation: Dynamics and control. AIChE Journal, 2013, 59, 2821-2832.	1.8	22
32	Multi-objective optimization of vapor recompressed distillation column in batch processing: Improving energy and cost savings. Applied Thermal Engineering, 2019, 150, 1273-1296.	3.0	22
33	Impact of vapor recompression in batch distillation on energy consumption, cost and CO2 emission: Open-loop versus closed-loop operation. Applied Thermal Engineering, 2014, 62, 365-374.	3.0	21
34	Performance analysis of a heat integrated column with heat pumping. Separation and Purification Technology, 2019, 209, 18-25.	3.9	21
35	Growth and Decomposition Mechanism of Clathrate Hydrates in the Presence of Porous Media and Seawater: Experimental Validation. Energy & Fuels, 2019, 33, 1433-1443.	2.5	20
36	Techno-economic Feasibility of Reactive Distillation for Biodiesel Production from Algal Oil: Comparing with a Conventional Multiunit System. Industrial & Engineering Chemistry Research, 2019, 58, 12028-12040.	1.8	20

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37	Modeling recovery of natural gas from hydrate reservoirs with carbon dioxide sequestration: Validation with lÄ¡nik Sikumi field data. Scientific Reports, 2019, 9, 18901.	1.6	20
38	Predicting wellbore dynamics in a steam-assisted gravity drainage system: Numeric and semi-analytic model, and validation. Applied Thermal Engineering, 2015, 91, 679-686.	3.0	19
39	Multiphase Vortex Flow Patterns in Slab Caster Mold: Experimental Study. ISIJ International, 2017, 57, 1553-1562.	0.6	19
40	Clathrate hydrate dynamics with synthetic- and bio-surfactant in porous media: Model formulation and validation. Chemical Engineering Science, 2020, 213, 115386.	1.9	19
41	Nano-catalytic heterogeneous reactive distillation for algal biodiesel production: Multi-objective optimization and heat integration. Energy Conversion and Management, 2021, 241, 114298.	4.4	19
42	Transforming conventional distillation sequence to dividing wall column: Minimizing cost, energy usage and environmental impact through genetic algorithm. Separation and Purification Technology, 2022, 297, 121437.	3.9	19
43	Assessment of the implementation of vapor recompression technique in batch distillation. Separation and Purification Technology, 2013, 107, 1-10.	3.9	18
44	A novel energy-efficient batch stripper: Thermodynamic feasibility, cost analysis and CO 2 emissions. Applied Thermal Engineering, 2015, 84, 292-300.	3.0	18
45	Evolutionary Algorithm Based Multiobjective Optimization of Vapor Recompressed Batch Extractive Distillation: Assessing Economic Potential and Environmental Impact. Industrial & Engineering Chemistry Research, 2020, 59, 5032-5046.	1.8	18
46	A Hybrid FLC-EKF Scheme for Temperature Control of a Refinery Debutanizer Column. IEEE Transactions on Industrial Informatics, 2010, 6, 25-35.	7.2	17
47	Dynamics and Estimator-Based Nonlinear Control of a PEM Fuel Cell. IEEE Transactions on Control Systems Technology, 2018, 26, 1124-1131.	3.2	17
48	Vapor recompressed batch distillation: Optimizing reflux ratio at variable mode. Computers and Chemical Engineering, 2019, 124, 184-196.	2.0	16
49	Computing Anisotropic Cavity Potential for Clathrate Hydrates. Journal of Physical Chemistry A, 2019, 123, 2762-2770.	1.1	15
50	Mixed-Integer dynamic optimization of conventional and vapor recompressed batch distillation for economic and environmental objectives. Chemical Engineering Research and Design, 2020, 154, 70-85.	2.7	15
51	A novel vapor recompressed batch extractive distillation: Design and retrofitting. Separation and Purification Technology, 2021, 260, 118225.	3.9	15
52	Improving Energy Efficiency and Cost-Effectiveness of Batch Distillation for Separating Wide Boiling Constituents. 1. Vapor Recompression Column. Industrial & Engineering Chemistry Research, 2012, 51, 15413-15422.	1.8	14
53	Insights into the competitive adsorption of pollutants on a mesoporous aluminaâ€“silica nano-sorbent synthesized from coal fly ash and a waste aluminium foil. RSC Advances, 2020, 10, 15514-15522.	1.7	13
54	Physical and molecular insights to Clathrate hydrate thermodynamics. Renewable and Sustainable Energy Reviews, 2021, 135, 110150.	8.2	13

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55	Nonlinear model-based control algorithm for a distillation column using software sensor. ISA Transactions, 2005, 44, 259-271.	3.1	12
56	Dynamic simulation, numerical control and analysis of a novel bottom flashing scheme in batch distillation. Computers and Chemical Engineering, 2016, 89, 166-171.	2.0	12
57	Internally heat integrated batch distillation: Vapor recompression and nonlinear control. Separation and Purification Technology, 2017, 189, 267-278.	3.9	12
58	Silica supported binary metal organic framework for removing organic dye involving combined effect of adsorption followed by photocatalytic degradation. Materials Research Bulletin, 2021, 138, 111227.	2.7	12
59	Structure-H hydrate of mixed gases: Phase equilibrium modeling and experimental validation. Journal of Molecular Liquids, 2021, 343, 117605.	2.3	12
60	Optimizing algal biodiesel production from a novel reactive distillation based unit: Reducing CO2 emission and cost. Chemical Engineering and Processing: Process Intensification, 2022, 176, 108948.	1.8	12
61	Globally linearized control on diabatic continuous stirred tank reactor: a case study. ISA Transactions, 2005, 44, 423-44.	3.1	11
62	Gas hydrate dynamics in distributed porous particles with saltwater: Model formulation and experimental validation. Chemical Engineering Journal, 2020, 392, 123660.	6.6	10
63	Improving energy efficiency and cost-effectiveness of batch distillation for separating wide boiling constituents. II: Internal versus external heat integration. Chemical Engineering and Processing: Process Intensification, 2013, 72, 122-129.	1.8	9
64	An energyâ€efficient costâ€effective transient batch rectifier with bottom flashing: Process dynamics and control. AICHE Journal, 2015, 61, 3699-3707.	1.8	9
65	A Novel Divided-Wall Heat Integrated Distillation Column: Thermodynamic and Economic Feasibility. Industrial & Engineering Chemistry Research, 2018, 57, 12127-12135.	1.8	8
66	Insight into the thermo-physics of gas hydrates: Three phase equilibrium in presence of electrolyte. Journal of Chemical Thermodynamics, 2020, 150, 106182.	1.0	8
67	Nonlinear control of a PEM fuel cell integrated system with water electrolyzer. Chemical Engineering Research and Design, 2021, 171, 150-167.	2.7	8
68	Nonlinear state estimation and control of a refinery debutanizer column. Computers and Chemical Engineering, 2009, 33, 1484-1490.	2.0	7
69	Vertical partition in fractionating tower to configure a novel heat integrated distillation hybridized with vapor recompression. Separation and Purification Technology, 2020, 235, 116153.	3.9	7
70	Optimal reflux splitting reactive distillation for algal biodiesel Production: Waste heat recovery through vapor recompression and organic Rankine cycle. Separation and Purification Technology, 2022, 292, 121007.	3.9	7
71	Nonmonotonous Lattice Distortion Model for Gas Hydrates. Journal of Physical Chemistry A, 2020, 124, 3149-3156.	1.1	6
72	A novel combination of internal and external heat integrations in batch distillation: Application to a reactive system. Applied Thermal Engineering, 2013, 59, 405-413.	3.0	5

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73	Proposing ab initio assisted lattice distortion theory for phase equilibrium: Pure and mixed refrigerant gas hydrates. AIChE Journal, 2022, 68, e17463.	1.8	4
74	Comparative control study of a simulated batch rectifier. Computers and Chemical Engineering, 2012, 36, 265-272.	2.0	3
75	Dynamic vapor recompression in a reactive batch rectifier: Analysis and nonlinear control. Energy, 2016, 115, 60-66.	4.5	3
76	Formulating noncovalent interactions to predict structural transition in mixed guest hydrates. AIChE Journal, 2022, 68, .	1.8	3
77	A nonlinear exponential observer for a batch distillation. , 2010, , .		2
78	Predicting phase equilibrium of a ternary feed to the hydroiodic acid section of SI thermochemical cycle. International Journal of Hydrogen Energy, 2015, 40, 15381-15388.	3.8	2
79	A comparative performance of thermodynamic models for a quaternary (HIâ€“H 2 Oâ€“I 2 â€“H 2) HIx system: Experimental verification. International Journal of Hydrogen Energy, 2016, 41, 13350-13358.	3.8	2
80	A Lattice Distortion Theory for Promotor Containing Clathrate Hydrates. Scientific Reports, 2020, 10, 9622.	1.6	2
81	Multiphase vortex flow patterns in slab caster mould: insights of air vortex interaction and plant data analysis. Canadian Metallurgical Quarterly, 2020, 59, 270-287.	0.4	2
82	Naturally Occurring Hydrate Formation and Dissociation in Marine Sediment: Experimental Validation. Industrial & Engineering Chemistry Research, 2021, 60, 1175-1184.	1.8	2
83	Microsecond molecular dynamics of methaneâ€“carbon dioxide swapping in pure and saline water environment. Scientific Reports, 2022, 12, 2634.	1.6	1