Rahul Anantharaman

List of Publications by Year
in descending order

75 papers	2,383 citations	185998 28 h-index	214527 47 g-index
77 all docs	77 docs citations	77 times ranked	2168 citing authors

#	Article	IF	Citations
1	Hydrogen production with CO2 capture. International Journal of Hydrogen Energy, 2016, 41, 4969-4992.	3.8	343
2	Comparison of Technologies for CO2 Capture from Cement Productionâ€"Part 1: Technical Evaluation. Energies, 2019, 12, 559.	1.6	137
3	Comparison of Technologies for CO2 Capture from Cement Productionâ€"Part 2: Cost Analysis. Energies, 2019, 12, 542.	1.6	135
4	Low-temperature CO2 capture technologies â€“ Applications and potential. International Journal of Refrigeration, 2013, 36, 1403-1416.	1.8	131
5	A techno-economic case study of CO2 capture, transport and storage chain from a cement plant in Norway. Journal of Cleaner Production, 2017, 144, 523-539.	4.6	94
6	Membrane properties required for post-combustion CO2 capture at coal-fired power plants. Journal of Membrane Science, 2016, 511, 250-264.	4.1	93
7	Design and off-design analyses of a pre-combustion CO2 capture process in a natural gas combined cycle power plant. International Journal of Greenhouse Gas Control, 2009, 3, 385-392.	2.3	86
8	Techno-economic assessment of optimised vacuum swing adsorption for post-combustion CO2 capture from steam-methane reformer flue gas. Separation and Purification Technology, 2021, 256, 117832.	3.9	64
9	Post-combustion CO2 capture from a natural gas combined cycle by CaO/CaCO3 looping. International Journal of Greenhouse Gas Control, 2012, 11, 25-33.	2.3	59
10	Cost-optimal CO 2 capture ratio for membrane-based capture from different CO 2 sources. Chemical Engineering Journal, 2017, 327, 618-628.	6.6	59
11	Techno-economic Analysis of MEA CO2 Capture from a Cement Kiln â€“ Impact of Steam Supply Scenario. Energy Procedia, 2017, 114, 6229-6239.	1.8	58
12	Low-temperature CO2 Removal from Natural Gas. Energy Procedia, 2012, 26, 41-48.	1.8	57
13	Design-point and part-load considerations for natural gas combined cycle plants with post combustion capture. International Journal of Greenhouse Gas Control, 2012, 11, 271-282.	2.3	56
14	Application of Advanced Technologies for CO2 Capture From Industrial Sources. Energy Procedia, 2013, 37, 7176-7185.	1.8	53
15	Thermal efficiency of coal-fired power plants: From theoretical to practical assessments. Energy Conversion and Management, 2015, 105, 530-544.	4.4	52
16	Offshore power generation with carbon capture and storage to decarbonise mainland electricity and offshore oil and gas installations: A techno-economic analysis. Applied Energy, 2019, 233-234, 478-494.	5.1	52
17	CO2 capture from waste-to-energy plants: Techno-economic assessment of novel integration concepts of calcium looping technology. Resources, Conservation and Recycling, 2020, 162, 104973.	5.3	50
18	Energy Level Composite Curvesâ€"a new graphical methodology for the integration of energy intensive processes. Applied Thermal Engineering, 2006, 26, 1378-1384.	3.0	49

#	Article	IF	Citations
19	Integration aspects of reactive absorption for post-combustion CO 2 capture from NGCC (natural gas) Tj ETQq1 1 0.784314 rgBT /Over	4.5	48
20	How much can novel solid sorbents reduce the cost of post-combustion <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e555" altimg="si168.svg"><mml:msub><mml:mrow><mml:mi mathvariant="normal">CO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> capture? A techno-economic investigation on the cost limits of pressureâ€“vacuum swing adsorption. Applied Energy, 2022, 306, 117955.	5.1	42
21	Techno-economic assessment of flexible solvent regeneration & storage for base load coal-fired power generation with post combustion CO2 capture. Energy Procedia, 2011, 4, 2612-2619.	1.8	40
22	CO2 Capture in Natural Gas Production by Adsorption Processes. Energy Procedia, 2017, 114, 2259-2264.	1.8	40
23	NGCC post-combustion CO2 capture with Ca/carbonate looping: Efficiency dependency on sorbent properties, capture unit performance and process configuration. International Journal of Greenhouse Gas Control, 2014, 24, 43-53.	2.3	35
24	Techno-economic Performance of a Hybrid Membrane â€“ Liquefaction Process for Post-combustion CO2 Capture. Energy Procedia, 2014, 61, 1244-1247.	1.8	32
25	A new approach to the identification of high-potential materials for cost-efficient membrane-based post-combustion CO₂capture. Sustainable Energy and Fuels, 2018, 2, 1225-1243.	2.5	32
26	High-purity H2 production with CO2 capture based on coal gasification. Energy, 2015, 88, 9-17.	4.5	31
27	Performance and NOx Emissions of Refinery Fired Heaters Retrofitted to Hydrogen Combustion. Energy Procedia, 2013, 37, 7214-7220.	1.8	30
28	The sequential framework for heat exchanger network synthesisâ€”The minimum number of units sub-problem. Computers and Chemical Engineering, 2010, 34, 1822-1830.	2.0	28
29	Multi-stage Membrane Processes for CO2 Capture from Cement Industry. Energy Procedia, 2014, 63, 6476-6483.	1.8	28
30	Optimal integration of compression heat with regenerative steam Rankine cycles in oxy-combustion coal based power plants. Energy, 2015, 84, 612-622.	4.5	23
31	Impact of Uncertainties on the Design and Cost of CCS From a Waste-to-Energy Plant. Frontiers in Energy Research, 2020, 8, .	1.2	22
32	Carbon capture and storage (CCS) options for co-production of electricity and synthetic fuels from indigenous coal in an Indian context. Energy for Sustainable Development, 2009, 13, 56-63.	2.0	20
33	CO2 Capture from Off-shore Gas Turbines Using Supersonic Gas Separation. Energy Procedia, 2014, 63, 243-252.	1.8	18
34	A Systematic Method for Membrane CO2 Capture Modeling and Analysis. Energy Procedia, 2014, 63, 217-224.	1.8	18
35	Low-temperature CCS from an IGCC Power Plant and Comparison with Physical Solvents. Energy Procedia, 2013, 37, 2204-2211.	1.8	17
36	Techno-economic comparison of three technologies for pre-combustion CO2 capture from a lignite-fired IGCC. Frontiers of Chemical Science and Engineering, 2020, 14, 436-452.	2.3	17

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37	A Tool for Integrated Multi-criteria Assessment of the CCS Value Chain. Energy Procedia, 2014, 63, 7290-7297.	1.8	16
38	Process design of onboard membrane carbon capture and liquefaction systems for LNG-fueled ships. Separation and Purification Technology, 2022, 282, 120052.	3.9	16
39	Novel cycles for power generation with CO2 capture using OMCM technology. Energy Procedia, 2009, 1, 335-342.	1.8	15
40	Dual phase high-temperature membranes for CO₂ separation â€“ performance assessment in post- and pre-combustion processes. Faraday Discussions, 2016, 192, 251-269.	1.6	15
41	A qualitative reliability and operability analysis of an integrated reforming combined cycle plant with CO2 capture. International Journal of Greenhouse Gas Control, 2009, 3, 411-421.	2.3	14
42	Pursuing the pre-combustion CCS route in oil refineries â€“ The impact on fired heaters. Applied Energy, 2013, 102, 833-839.	5.1	14
43	Evaluation of different CHP options for refinery integration in the context of a low carbon future. International Journal of Greenhouse Gas Control, 2009, 3, 152-160.	2.3	13
44	Multi-criteria analyses of two solvent and one low-temperature concepts for acid gas removal from natural gas. Journal of Natural Gas Science and Engineering, 2014, 20, 38-49.	2.1	12
45	Design of Steam Cycles for Oxy-combustion Coal based Power Plants with Emphasis on Heat Integration. Energy Procedia, 2014, 51, 119-126.	1.8	12
46	Membrane-assisted CO2 Liquefaction: Performance Modelling of CO2 Capture from Flue Gas in Cement Production. Energy Procedia, 2017, 114, 72-80.	1.8	12
47	Selection of Optimal CO2 Capture Plant Capacity for Better Investment Decisions. Energy Procedia, 2013, 37, 7039-7045.	1.8	10
48	Energy and Cost Evaluation of A Low-temperature CO2 Capture Unit for IGCC plants. Energy Procedia, 2014, 63, 2031-2036.	1.8	10
49	Optimal integration of compression heat with regenerative steam Rankine cycles. Computer Aided Chemical Engineering, 2014, 34, 519-524.	0.3	7
50	A Comparison of Post-combustion Capture Technologies for the NGCC. Energy Procedia, 2017, 114, 2631-2641.	1.8	7
51	Low Temperature Applications for CO2 Capture in Hydrogen Production. Computer Aided Chemical Engineering, 2020, , 445-450.	0.3	6
52	Techno-Economic Analyses of the CaO/CaCO3 Post-Combustion CO2 Capture From NGCC Power Plants. Frontiers in Chemical Engineering, 2021, 2, .	1.3	6
53	CCS â€“ A technology for now: general discussion. Faraday Discussions, 2016, 192, 125-151.	1.6	5
54	Model reformulations for Work and Heat Exchange Network (WHEN) synthesis problems. Computers and Chemical Engineering, 2019, 125, 89-97.	2.0	5

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55	CO2 Capture Processes: Novel Approach to Benchmarking and Evaluation of Improvement Potentials. Energy Procedia, 2013, 37, 2536-2543.	1.8	4
56	CCS â€“ A technology for the future: general discussion. Faraday Discussions, 2016, 192, 303-335.	1.6	4
57	CCS on Offshore Oil and Gas Installation - Design of Post-Combustion Capture System and Steam Cycle. Energy Procedia, 2017, 114, 6650-6659.	1.8	4
58	CO2 Capture from IGCC by Low-Temperature Synthesis Gas Separation. Energies, 2022, 15, 515.	1.6	4
59	Developments in the sequential framework for heat exchanger network synthesis of industrial size problems. Computer Aided Chemical Engineering, 2006, , 725-730.	0.3	3
60	Multi-Scale modelling of a membrane reforming power cycle with CO2 capture. Computer Aided Chemical Engineering, 2011, 29, 6-10.	0.3	3
61	GHGT-12 Performance of the IGCC with distributed feeding of H2 in the gas turbine burner. Energy Procedia, 2014, 63, 2037-2044.	1.8	3
62	Advanced methodology for screening of novel adsorption materials for cost-efficient CO2 capture. SSRN Electronic Journal, 0, , .	0.4	3
63	Design of an IRCC with CO2 capture utilizing a mixed integer optimization method. Computer Aided Chemical Engineering, 2012, 30, 51-55.	0.3	3
64	Revisiting the Simultaneous Process Optimization with Heat Integration Problem. Computer Aided Chemical Engineering, 2014, 34, 243-248.	0.3	2
65	Feeding a Gas Turbine with Aluminum Plant Exhaust for Increased CO2 Concentration in Capture Plant. Energy Procedia, 2014, 51, 411-420.	1.8	1
66	Negative Emissions in the Waste-to-Energy Sector: An Overview of the Newest-CCUS Programme. SSRN Electronic Journal, 0, , .	0.4	1
67	Constrained adaptive sampling for domain reduction in surrogate model generation: Applications to hydrogen production. AICHE Journal, 2021, 67, e17357.	1.8	1
68	A new paradigm in process synthesis focus on design of power plants and industrial processes integrated with CO2 capture. Computer Aided Chemical Engineering, 2016, 38, 1189-1194.	0.3	1
69	Modelling of the oxy-combustion fluid catalytic cracking units. Computer Aided Chemical Engineering, 2017, , 331-336.	0.3	1
70	Understanding the Cost of Retrofitting CO2 Capture to an Integrated Oil Refinery. SSRN Electronic Journal, 0, , .	0.4	1
71	Conceptual design of an efficient Hydrogen production process from Natural Gas using an extension to the â€œG-Hâ€•methodology. Computer Aided Chemical Engineering, 2018, , 379-384.	0.3	0
72	Process-informed Design of Tailor-made Sorbent Materials for Energy Efficient Carbon Capture (PrISMa). SSRN Electronic Journal, 0, , .	0.4	0

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73	Editorial: From CO2 Emissions to Fuels and Chemicals: Current Development, Challenges and Perspectives. Frontiers in Chemical Engineering, 2021, 3, .	1.3	0
74	Energy Integration of an IGCC Plant for Combined Hydrogen and Electricity Productionâ€"Methodology and Tools Integration. , 2009, , 327-334.		0
75	Feasibility of Selective Exhaust Gas Recycle Process for Membrane-based CO2 Capture from Natural Gas Combined Cycles â€“ Showstoppers and Alternative Process Configurations. SSRN Electronic Journal, 0, , .	0.4	0