Dawid P Hanak

List of Publications by Year
in descending order

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59 papers	2,105 citations	185998 28 h-index	233125 45 g-index
61 all docs	61 docs citations	61 times ranked	1683 citing authors

#	Article	IF	Citations
1	A review of developments in pilot-plant testing and modelling of calcium looping process for CO₂ capture from power generation systems. Energy and Environmental Science, 2015, 8, 2199-2249.	15.6	254
2	Direct air capture: process technology, techno-economic and socio-political challenges. Energy and Environmental Science, 2022, 15, 1360-1405.	15.6	176
3	A systematic review of key challenges of CO2 transport via pipelines. Renewable and Sustainable Energy Reviews, 2018, 81, 2563-2583.	8.2	100
4	Calcium looping with inherent energy storage for decarbonisation of coal-fired power plant. Energy and Environmental Science, 2016, 9, 971-983.	15.6	77
5	Efficiency improvements for the coal-fired power plant retrofit with CO 2 capture plant using chilled ammonia process. Applied Energy, 2015, 151, 258-272.	5.1	69
6	Heat integration and exergy analysis for a supercritical high-ash coal-fired power plant integrated with a post-combustion carbon capture process. Fuel, 2014, 134, 126-139.	3.4	68
7	Techno-economic analysis of oxy-combustion coal-fired power plant with cryogenic oxygen storage. Applied Energy, 2017, 191, 193-203.	5.1	66
8	Calcium looping with supercritical CO2 cycle for decarbonisation of coal-fired power plant. Energy, 2016, 102, 343-353.	4.5	64
9	Techno-economic assessment of coal- or biomass-fired oxy-combustion power plants with supercritical carbon dioxide cycle. Energy Conversion and Management, 2020, 221, 113143.	4.4	61
10	From post-combustion carbon capture to sorption-enhanced hydrogen production: A state-of-the-art review of carbonate looping process feasibility. Energy Conversion and Management, 2018, 177, 428-452.	4.4	59
11	Techno-economic feasibility assessment of calcium looping combustion using commercial technology appraisal tools. Journal of Cleaner Production, 2019, 219, 540-551.	4.6	54
12	Modelling and comparison of calcium looping and chemical solvent scrubbing retrofits for CO 2 capture from coal-fired power plant. International Journal of Greenhouse Gas Control, 2015, 42, 226-236.	2.3	53
13	An experimental investigation of the combustion performance of human faeces. Fuel, 2016, 184, 780-791.	3.4	53
14	Nitrogen-rich hyper-crosslinked polymers for low-pressure CO2 capture. Chemical Engineering Journal, 2018, 334, 2004-2013.	6.6	53
15	Techno-economic analysis of sorption-enhanced steam methane reforming in a fixed bed reactor network integrated with fuel cell. Journal of Power Sources, 2017, 364, 41-51.	4.0	49
16	Rate-based model development, validation and analysis of chilled ammonia process as an alternative CO2 capture technology for coal-fired power plants. International Journal of Greenhouse Gas Control, 2015, 34, 52-62.	2.3	46
17	Modelling of sorption-enhanced steam methane reforming in a fixed bed reactor network integrated with fuel cell. Applied Energy, 2018, 210, 1-15.	5.1	46
18	Techno-economic evaluation of near-zero CO2 emission gas-fired power generation technologies: A review. Journal of Natural Gas Science and Engineering, 2020, 74, 103095.	2.1	43

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19	Efficient-and-stable CH4 reforming with integrated CO2 capture and utilization using Li4SiO4 sorbent. Separation and Purification Technology, 2021, 277, 119476.	3.9	42
20	Economic feasibility of calcium looping under uncertainty. Applied Energy, 2017, 208, 691-702.	5.1	39
21	High-efficiency negative-carbon emission power generation from integrated solid-oxide fuel cell and calciner. Applied Energy, 2017, 205, 1189-1201.	5.1	37
22	Calcium looping combustion for high-efficiency low-emission power generation. Journal of Cleaner Production, 2017, 161, 245-255.	4.6	35
23	Comparison of probabilistic performance of calcium looping and chemical solvent scrubbing retrofits for CO2 capture from coal-fired power plant. Applied Energy, 2016, 172, 323-336.	5.1	34
24	Probabilistic performance assessment of a coal-fired power plant. Applied Energy, 2015, 139, 350-364.	5.1	33
25	Combined heat and power generation with lime production for direct air capture. Energy Conversion and Management, 2018, 160, 455-466.	4.4	33
26	Technical and economic feasibility evaluation of calcium looping with no CO2 recirculation. Chemical Engineering Journal, 2018, 335, 763-773.	6.6	32
27	Techno-economic evaluation of the 2-amino-2-methyl-1-propanol (AMP) process for CO2 capture from natural gas combined cycle power plant. International Journal of Greenhouse Gas Control, 2018, 70, 45-56.	2.3	31
28	Conceptual energy and water recovery system for self-sustained nano membrane toilet. Energy Conversion and Management, 2016, 126, 352-361.	4.4	29
29	Techno-economic feasibility assessment of sorption enhanced gasification of municipal solid waste for hydrogen production. International Journal of Hydrogen Energy, 2022, 47, 6586-6604.	3.8	29
30	Evaluation and Modeling of Part-Load Performance of Coal-Fired Power Plant with Postcombustion CO₂ Capture. Energy & Fuels, 2015, 29, 3833-3844.	2.5	28
31	Techno-economic feasibility assessment of CO2 capture from coal-fired power plants using molecularly imprinted polymer. Fuel, 2018, 214, 512-520.	3.4	26
32	Feasibility of CaO/CuO/NiO sorption-enhanced steam methane reforming integrated with solid-oxide fuel cell for near-zero-CO2 emissions cogeneration system. Applied Energy, 2018, 230, 241-256.	5.1	24
33	Gas-fired chemical looping combustion with supercritical CO2 cycle. Applied Energy, 2019, 249, 237-244.	5.1	23
34	Integrating biomass into energy supply chain networks. Journal of Cleaner Production, 2020, 248, 119246.	4.6	23
35	Advanced power cycles for coal-fired power plants based on calcium looping combustion: A techno-economic feasibility assessment. Applied Energy, 2020, 269, 114954.	5.1	23
36	Unlocking the potential of pulp and paper industry to achieve carbon-negative emissions via calcium looping retrofit. Journal of Cleaner Production, 2021, 280, 124431.	4.6	23

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37	Modelling of an integrated process for atmospheric carbon dioxide capture and methanation. Journal of Cleaner Production, 2022, 356, 131827.	4.6	18
38	Techno-economic feasibility of power to gasâ€“oxy-fuel boiler hybrid system under uncertainty. International Journal of Hydrogen Energy, 2019, 44, 9505-9516.	3.8	17
39	Linking renewables and fossil fuels with carbon capture via energy storage for a sustainable energy future. Frontiers of Chemical Science and Engineering, 2020, 14, 453-459.	2.3	17
40	Techno-economic-environmental assessment of biomass oxy-gasification staged oxy-combustion for negative emission combined heat and power. Applied Thermal Engineering, 2021, 196, 117254.	3.0	16
41	Process modelling and techno-economic analysis of natural gas combined cycle integrated with calcium looping. Thermal Science, 2016, 20, 59-67.	0.5	14
42	Investigation of Alternative Strategies for Integrating Post-combustion CO₂ Capture to a Natural Gas Combined Cycle Power Plant. Energy & Fuels, 2015, 29, 4624-4633.	2.5	11
43	Carbon capture for decarbonisation of energy-intensive industries: a comparative review of techno-economic feasibility of solid looping cycles. Frontiers of Chemical Science and Engineering, 2022, 16, 1291-1317.	2.3	11
44	Staged oxy-fuel natural gas combined cycle. Applied Thermal Engineering, 2019, 153, 761-767.	3.0	10
45	Effect of Seawater, Aluminate Cement, and Alumina-Rich Spinel on Pelletized CaO-Based Sorbents for Calcium Looping. Industrial & Engineering Chemistry Research, 2019, 58, 11910-11919.	1.8	8
46	Supercritical CO2 cycle for coal-fired power plant based on calcium looping combustion. Thermal Science and Engineering Progress, 2020, 20, 100723.	1.3	8
47	Kinetic study and modeling on the regeneration of Li4SiO4-based sorbents for high-temperature CO2 capture. Fuel Processing Technology, 2021, 222, 106976.	3.7	7
48	Process development and performance assessment of flexible calcium looping biomass gasification for production of renewable gas with adjustable composition. International Journal of Energy Research, 2022, 46, 6197-6215.	2.2	6
49	Thermodynamic models applied to CO2 absorption modelling. Reviews in Chemical Engineering, 2019, .	2.3	5
50	Reaction Mechanism and Kinetics of the Sulfation of Li4SiO4 for High-Temperature CO2 Adsorption. ACS Sustainable Chemistry and Engineering, 2021, 9, 9386-9394.	3.2	4
51	Black liquor gasification with calcium looping for carbon-negative pulp and paper industry. International Journal of Greenhouse Gas Control, 2021, 110, 103436.	2.3	4
52	Integration of solid-oxide fuel cells and absorption refrigeration for efficient combined cooling, heat and power production. Clean Energy, 2020, 4, 328-348.	1.5	4
53	Technoeconomic Analysis of a Fixed Bed System for Single/Twoâ€“Stage Chemical Looping Combustion. Energy Technology, 2021, 9, 2100538.	1.8	3
54	Sorption-enhanced gasification of municipal solid waste for hydrogen production: a comparative techno-economic analysis using limestone, dolomite and doped limestone. Biomass Conversion and Biorefinery, 0, , .	2.9	3

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55	Evaluation of a calcium looping CO2 capture plant retrofit to a coal-fired power plant. Computer Aided Chemical Engineering, 2016, 38, 2115-2120.	0.3	1
56	Packed bed sorption enhanced methane reforming on CaO/CuO/Al2O3(NiO) catalyst. Computer Aided Chemical Engineering, 2018, 43, 1389-1394.	0.3	1
57	Efficient decomposition strategy for scheduling of multistage production system and combined heat and power. Computers and Chemical Engineering, 2020, 133, 106634.	2.0	1
58	Environmental life-cycle assessment of waste-coal pellets production. Clean Energy, 2022, 6, 1-14.	1.5	1
59	Rate-based Modelling of Chilled Ammonia Process (CAP) for CO2 Capture. Computer Aided Chemical Engineering, 2014, , 181-186.	0.3	0