

Ponnivalavan Babu

List of Publications by Year in descending order

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papers

4,461
citations

201385

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33
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33
all docs

33
docs citations

33
times ranked

1895
citing authors

#	ARTICLE	IF	CITATIONS
1	Review of natural gas hydrates as an energy resource: Prospects and challenges. Applied Energy, 2016, 162, 1633-1652.	5.1	1,328
2	A review of the hydrate based gas separation (HBGS) process for carbon dioxide pre-combustion capture. Energy, 2015, 85, 261-279.	4.5	481
3	A Review of Clathrate Hydrate Based Desalination To Strengthen Energy-Water Nexus. ACS Sustainable Chemistry and Engineering, 2018, 6, 8093-8107.	3.2	275
4	Rapid methane hydrate formation to develop a cost effective large scale energy storage system. Chemical Engineering Journal, 2016, 290, 161-173.	6.6	261
5	Pre-combustion capture of carbon dioxide in a fixed bed reactor using the clathrate hydrate process. Energy, 2013, 50, 364-373.	4.5	222
6	Morphology of Methane Hydrate Formation in Porous Media. Energy & Fuels, 2013, 27, 3364-3372.	2.5	145
7	Formation and Dissociation Kinetics of Methane Hydrates in Seawater and Silica Sand. Energy & Fuels, 2014, 28, 2708-2716.	2.5	132
8	Unusual behavior of propane as a co-guest during hydrate formation in silica sand: Potential application to seawater desalination and carbon dioxide capture. Chemical Engineering Science, 2014, 117, 342-351.	1.9	131
9	A novel conceptual design of hydrate based desalination (HyDesal) process by utilizing LNG cold energy. Applied Energy, 2018, 222, 13-24.	5.1	131
10	HBGS (hydrate based gas separation) process for carbon dioxide capture employing an unstirred reactor with cyclopentane. Energy, 2013, 63, 252-259.	4.5	125
11	Carbon dioxide hydrate kinetics in porous media with and without salts. Applied Energy, 2016, 162, 1131-1140.	5.1	113
12	Medium pressure hydrate based gas separation (HBGS) process for pre-combustion capture of carbon dioxide employing a novel fixed bed reactor. International Journal of Greenhouse Gas Control, 2013, 17, 206-214.	2.3	107
13	Systematic Evaluation of Tetra-n-butyl Ammonium Bromide (TBAB) for Carbon Dioxide Capture Employing the Clathrate Process. Industrial & Engineering Chemistry Research, 2014, 53, 4878-4887.	1.8	104
14	Effect of NaCl on methane hydrate formation and dissociation in porous media. Journal of Natural Gas Science and Engineering, 2015, 27, 178-189.	2.1	104
15	A New Porous Material to Enhance the Kinetics of Clathrate Process: Application to Precombustion Carbon Dioxide Capture. Environmental Science & Technology, 2013, 47, 13191-13198.	4.6	91
16	Morphology of Carbon Dioxide-Hydrogen-Cyclopentane Hydrates with or without Sodium Dodecyl Sulfate. Crystal Growth and Design, 2013, 13, 2047-2059.	1.4	86
17	Economic evaluation of energy efficient hydrate based desalination utilizing cold energy from liquefied natural gas (LNG). Desalination, 2019, 463, 69-80.	4.0	86
18	Hydrate phase equilibrium of ternary gas mixtures containing carbon dioxide, hydrogen and propane. Journal of Chemical Thermodynamics, 2013, 61, 58-63.	1.0	67

#	ARTICLE	IF	CITATIONS
19	Thermodynamic and Kinetic Verification of Tetra- <i>n</i> -butyl Ammonium Nitrate (TBANO ₃) as a Promoter for the Clathrate Process Applicable to Precombustion Carbon Dioxide Capture. <i>Environmental Science & Technology</i> , 2014, 48, 3550-3558.	4.6	67
20	Enhanced kinetics for the clathrate process in a fixed bed reactor in the presence of liquid promoters for pre-combustion carbon dioxide capture. <i>Energy</i> , 2014, 70, 664-673.	4.5	61
21	Hydrate-based desalination (HyDesal) process employing a novel prototype design. <i>Chemical Engineering Science</i> , 2020, 218, 115563.	1.9	47
22	A systematic kinetic study to evaluate the effect of tetrahydrofuran on the clathrate process for pre-combustion capture of carbon dioxide. <i>Energy</i> , 2016, 94, 431-442.	4.5	45
23	CO ₂ capture using the clathrate hydrate process employing cellulose foam as a porous media. <i>Canadian Journal of Chemistry</i> , 2015, 93, 808-814.	0.6	39
24	Dissociation of Fresh- And Seawater Hydrates along the Phase Boundaries between 2.3 and 17 MPa. <i>Energy & Fuels</i> , 2012, 26, 6240-6246.	2.5	32
25	Impact of experimental pressure and temperature on semiclathrate hydrate formation for pre-combustion capture of CO ₂ using tetra- <i>n</i> -butyl ammonium nitrate. <i>Energy</i> , 2014, 78, 458-464.	4.5	29
26	Impact of fixed bed reactor orientation, liquid saturation, bed volume and temperature on the clathrate hydrate process for pre-combustion carbon capture. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 35, 1499-1510.	2.1	29
27	Energy Analysis of Methane-Hydrate-Based Produced Water Desalination. <i>Energy & Fuels</i> , 2021, 35, 2514-2519.	2.5	28
28	Techno-Economic Evaluation of Cyclopentane Hydrate-Based Desalination with Liquefied Natural Gas Cold Energy Utilization. <i>Energy Technology</i> , 2020, 8, 1900212.	1.8	24
29	Improved Kinetics and Water Recovery with Propane as Co-Guest Gas on the Hydrate-Based Desalination (HyDesal) Process. <i>ChemEngineering</i> , 2019, 3, 31.	1.0	19
30	Experimental measurements and modeling of the dissociation conditions of semiclathrate hydrates of tetrabutyl ammonium nitrate and carbon dioxide. <i>Fluid Phase Equilibria</i> , 2016, 413, 80-85.	1.4	15
31	Effect of Salts on TBAB Semi Clathrate Hydrate Formation: Application to Produced Water Desalination. <i>Energy & Fuels</i> , 2020, 34, 12810-12821.	2.5	15
32	Methane Production from Natural Gas Hydrates via Carbon Dioxide Fixation. <i>Energy Procedia</i> , 2014, 61, 1776-1779.	1.8	14
33	The Impact of Pressure and Temperature on Tetra- <i>n</i> -butyl Ammonium Bromide Semi-clathrate Process for Carbon Dioxide Capture. <i>Energy Procedia</i> , 2014, 61, 1780-1783.	1.8	8