# Gary T Rochelle

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 214 papers | 16,574 citations | 29994 54 h-index | 16127 124 g-index |
| 217 all docs | 217 docs citations | 217 times ranked | 8924 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Amine Scrubbing for CO <sub>2</sub> Capture. Science, 2009, 325, 1652-1654. | 6.0 | 3,490 |
| 2 | Carbon capture and storage update. Energy and Environmental Science, 2014, 7, 130-189. | 15.6 | 1,765 |
| 3 | Absorption of carbon dioxide into aqueous piperazine: reaction kinetics, mass transfer and solubility. Chemical Engineering Science, 2000, 55, 5531-5543. | 1.9 | 531 |
| 4 | Model of vapor-liquid equilibria for aqueous acid gas-alkanolamine systems using the electrolyte-NRTL equation. Industrial & Engineering Chemistry Research, 1989, 28, 1060-1073. | 1.8 | 455 |
| 5 | Aqueous piperazine as the new standard for CO2 capture technology. Chemical Engineering Journal, 2011, 171, 725-733. | 6.6 | 417 |
| 6 | Carbon dioxide capture with concentrated, aqueous piperazine. International Journal of Greenhouse Gas Control, 2010, 4, 119-124. | 2.3 | 318 |
| 7 | Modeling of CO2 capture by aqueous monoethanolamine. AIChE Journal, 2003, 49, 1676-1686. | 1.8 | 302 |
| 8 | Alternative stripper configurations for CO<sub>2</sub> capture by aqueous amines. AIChE Journal, 2007, 53, 3144-3154. | 1.8 | 264 |
| 9 | Oxidative Degradation of Monoethanolamine. Industrial & Engineering Chemistry Research, 2002, 41, 4178-4186. | 1.8 | 253 |
| 10 | Rate-Based Process Modeling Study of CO<sub>2</sub> Capture with Aqueous Monoethanolamine Solution. Industrial & Engineering Chemistry Research, 2009, 48, 9233-9246. | 1.8 | 249 |
| 11 | Absorption of carbon dioxide in aqueous piperazine/methyldiethanolamine. AIChE Journal, 2002, 48, 2788-2799. | 1.8 | 247 |
| 12 | Monoethanolamine Degradation:Â O2Mass Transfer Effects under CO2Capture Conditions. Industrial & Engineering Chemistry Research, 2004, 43, 6400-6408. | 1.8 | 246 |
| 13 | Energy Performance of Stripper Configurations for CO2Capture by Aqueous Amines. Industrial & Engineering Chemistry Research, 2006, 45, 2457-2464. | 1.8 | 243 |
| 14 | Thermal degradation of monoethanolamine at stripper conditions. Energy Procedia, 2009, 1, 327-333. | 1.8 | 243 |
| 15 | Carbon dioxide absorption with aqueous potassium carbonate promoted by piperazine. Chemical Engineering Science, 2004, 59, 3619-3630. | 1.9 | 234 |
| 16 | Carbon Dioxide Absorption and Desorption in Aqueous Monoethanolamine Solutions in a Rotating Packed Bed. Industrial & Engineering Chemistry Research, 2007, 46, 2823-2833. | 1.8 | 211 |
| 17 | Innovative Absorber/Stripper Configurations for CO2Capture by Aqueous Monoethanolamine. Industrial & Engineering Chemistry Research, 2006, 45, 2465-2472. | 1.8 | 202 |
| 18 | Effects of the Temperature Bulge in CO<sub>2</sub> Absorption from Flue Gas by Aqueous Monoethanolamine. Industrial & Engineering Chemistry Research, 2008, 47, 867-875. | 1.8 | 181 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Thermal degradation of amines for CO2 capture. Current Opinion in Chemical Engineering, 2012, 1, 183-190. | 3.8 | 171 |
| 20 | Thermodynamics of Piperazine/Methyldiethanolamine/Water/Carbon Dioxide. Industrial & Engineering Chemistry Research, 2002, 41, 604-612. | 1.8 | 162 |
| 21 | Amine volatility in CO2 capture. International Journal of Greenhouse Gas Control, 2010, 4, 707-715. | 2.3 | 159 |
| 22 | Kinetics of Carbon Dioxide Absorption into Aqueous Potassium Carbonate and Piperazine. Industrial & Engineering Chemistry Research, 2006, 45, 2531-2545. | 1.8 | 155 |
| 23 | Oxidation Inhibitors for Copper and Iron Catalyzed Degradation of Monoethanolamine in CO2Capture Processes. Industrial & Engineering Chemistry Research, 2006, 45, 2513-2521. | 1.8 | 148 |
| 24 | Degradation of aqueous piperazine in carbon dioxide capture. International Journal of Greenhouse Gas Control, 2010, 4, 756-761. | 2.3 | 140 |
| 25 | Thermodynamics of aqueous potassium carbonate, piperazine, and carbon dioxide. Fluid Phase Equilibria, 2005, 227, 197-213. | 1.4 | 129 |
| 26 | A dimensionless model for predicting the massâ€transfer area of structured packing. AIChE Journal, 2011, 57, 1173-1184. | 1.8 | 125 |
| 27 | Absorption and desorption rates of carbon dioxide with monoethanolamine and piperazine. Energy Procedia, 2009, 1, 1163-1169. | 1.8 | 124 |
| 28 | CO2Absorption Rate and Solubility in Monoethanolamine/Piperazine/Water. Separation Science and Technology, 2003, 38, 337-357. | 1.3 | 114 |
| 29 | MDEA/Piperazine as a solvent for CO2 capture. Energy Procedia, 2009, 1, 1351-1357. | 1.8 | 114 |
| 30 | A Thermodynamic Model of Methyldiethanolamineâˆ'CO2âˆ'H2Sâˆ'Water. Industrial & Engineering Chemistry Research, 1997, 36, 3944-3953. | 1.8 | 113 |
| 31 | Nitrogen Dioxide Absorption and Sulfite Oxidation in Aqueous Sulfite. Environmental Science & Technology, 1998, 32, 1994-2003. | 4.6 | 113 |
| 32 | Dynamic Modeling to Minimize Energy Use for CO<sub>2</sub> Capture in Power Plants by Aqueous Monoethanolamine. Industrial & Engineering Chemistry Research, 2009, 48, 6105-6111. | 1.8 | 110 |
| 33 | Stripper configurations for CO2 capture by aqueous monoethanolamine. Chemical Engineering Research and Design, 2011, 89, 1639-1646. | 2.7 | 110 |
| 34 | Aqueous Ethylenediamine for CO<sub>2</sub> Capture. ChemSusChem, 2010, 3, 913-918. | 3.6 | 99 |
| 35 | Modeling CO2 capture with aqueous monoethanolamine. International Journal of Greenhouse Gas Control, 2010, 4, 161-166. | 2.3 | 88 |
| 36 | Reaction Products from the Oxidative Degradation of Monoethanolamine. Industrial & Engineering Chemistry Research, 2011, 50, 667-673. | 1.8 | 88 |

| # | ARTICLE | IF | CITATIONS |
|---|---|---|---|
| 37 | Aqueous piperazine derivatives for CO2 capture: Accurate screening by a wetted wall column. Chemical Engineering Research and Design, 2011, 89, 1693-1710. | 2.7 | 88 |
| 38 | Numerical simulation of theories for gas absorption with chemical reaction. AIChE Journal, 1989, 35, 1271-1281. | 1.8 | 80 |
| 39 | Carbon dioxide capture with concentrated, aqueous piperazine. Energy Procedia, 2009, 1, 1489-1496. | 1.8 | 79 |
| 40 | Amine blends using concentrated piperazine. Energy Procedia, 2013, 37, 353-369. | 1.8 | 79 |
| 41 | Rate-Based Modeling of Reactive Absorption of CO2 and H2S into Aqueous Methyldiethanolamine. Industrial & Engineering Chemistry Research, 1998, 37, 4107-4117. | 1.8 | 76 |
| 42 | CO2 absorption rate in semi-aqueous monoethanolamine. Chemical Engineering Science, 2018, 182, 56-66. | 1.9 | 73 |
| 43 | CO2 absorption into aqueous mixtures of diglycolamineÂ® and methyldiethanolamine. Chemical Engineering Science, 2000, 55, 5125-5140. | 1.9 | 72 |
| 44 | CO<sub>2</sub>Absorption Rate into Concentrated Aqueous Monoethanolamine and Piperazine. Journal of Chemical & Engineering Data, 2011, 56, 2187-2195. | 1.0 | 72 |
| 45 | Catalysts and inhibitors for oxidative degradation of monoethanolamine. International Journal of Greenhouse Gas Control, 2009, 3, 704-711. | 2.3 | 70 |
| 46 | Optimizing post-combustion CO2 capture in response to volatile electricity prices. International Journal of Greenhouse Gas Control, 2012, 8, 180-195. | 2.3 | 68 |
| 47 | Modeling CO2 capture with aqueous monoethanolamine. Energy Procedia, 2009, 1, 1171-1178. | 1.8 | 65 |
| 48 | Regeneration with Rich Bypass of Aqueous Piperazine and Monoethanolamine for CO<sub>2</sub> Capture. Industrial & Engineering Chemistry Research, 2014, 53, 4067-4074. | 1.8 | 65 |
| 49 | Capacity and absorption rate of tertiary and hindered amines blended with piperazine for CO 2 capture. Chemical Engineering Science, 2016, 155, 397-404. | 1.9 | 65 |
| 50 | Influence of Surface Tension on Effective Packing Area. Industrial & Engineering Chemistry Research, 2008, 47, 1253-1260. | 1.8 | 60 |
| 51 | Approaching a reversible stripping process for CO2 capture. Chemical Engineering Journal, 2016, 283, 1033-1043. | 6.6 | 60 |
| 52 | Turning CO2 Capture On and Off in Response to Electric Grid Demand: A Baseline Analysis of Emissions and Economics. Journal of Energy Resources Technology, Transactions of the ASME, 2010, 132, . | 1.4 | 58 |
| 53 | Accurate screening of amines by the Wetted Wall Column. Energy Procedia, 2011, 4, 101-108. | 1.8 | 55 |
| 54 | Influence of viscosity and surface tension on the effective mass transfer area of structured packing. Energy Procedia, 2009, 1, 1197-1204. | 1.8 | 54 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Stripper configurations for CO2 capture by aqueous monoethanolamine and piperazine. Energy Procedia, 2011, 4, 1323-1330. | 1.8 | 54 |
| 56 | Hybrid Membrane-absorption CO2 Capture Process. Energy Procedia, 2014, 63, 605-613. | 1.8 | 54 |
| 57 | Simultaneous Sulfur Dioxide and Nitrogen Dioxide Removal by Calcium Hydroxide and Calcium Silicate Solids. Journal of the Air and Waste Management Association, 1998, 48, 819-828. | 0.9 | 53 |
| 58 | A simple model for prediction of acid gas solubilities in alkanolamines. Separation and Purification Technology, 1996, 10, 181-186. | 0.3 | 52 |
| 59 | Physical and chemical solubility of carbon dioxide in aqueous methyldiethanolamine. Fluid Phase Equilibria, 2000, 168, 241-258. | 1.4 | 52 |
| 60 | Rate modeling of CO2 stripping from potassium carbonate promoted by piperazineâ˜†. International Journal of Greenhouse Gas Control, 2009, 3, 121-132. | 2.3 | 52 |
| 61 | Total pressure and CO2 solubility at high temperature in aqueous amines. Energy Procedia, 2011, 4, 117-124. | 1.8 | 52 |
| 62 | Volatility of aqueous amines in CO2 capture. Energy Procedia, 2011, 4, 1624-1630. | 1.8 | 50 |
| 63 | Foaming of aqueous piperazine and monoethanolamine for CO2 capture. International Journal of Greenhouse Gas Control, 2011, 5, 381-386. | 2.3 | 49 |
| 64 | Piperazine Degradation in Pilot Plants. Energy Procedia, 2013, 37, 1912-1923. | 1.8 | 49 |
| 65 | Decomposition of Nitrosamines in CO2 Capture by Aqueous Piperazine or Monoethanolamine. Environmental Science & Technology, 2014, 48, 5996-6002. | 4.6 | 47 |
| 66 | Catalysts and inhibitors for MEA oxidation. Energy Procedia, 2009, 1, 1179-1185. | 1.8 | 44 |
| 67 | Degradation of aqueous methyldiethanolamine by temperature and oxygen cycling. Energy Procedia, 2011, 4, 23-28. | 1.8 | 43 |
| 68 | Pilot plant test of the advanced flash stripper for CO<sub>2</sub> capture. Faraday Discussions, 2016, 192, 37-58. | 1.6 | 43 |
| 69 | Optimization of Advanced Flash Stripper for CO2 Capture using Piperazine. Energy Procedia, 2014, 63, 1504-1513. | 1.8 | 42 |
| 70 | CO2 solubility and mass transfer in water-lean solvents. Chemical Engineering Science, 2019, 202, 403-416. | 1.9 | 42 |
| 71 | Characterization of Piperazine/2-Aminomethylpropanol for Carbon Dioxide Capture. Energy Procedia, 2013, 37, 340-352. | 1.8 | 41 |
| 72 | Kinetics of <i>N</i>-Nitrosopiperazine Formation from Nitrite and Piperazine in CO<sub>2</sub> Capture. Environmental Science & Technology, 2013, 47, 3528-3534. | 4.6 | 41 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Mass Transfer Parameters for Packings: Effect of Viscosity. Industrial & Engineering Chemistry Research, 2018, 57, 718-729. | 1.8 | 41 |
| 74 | Thermal degradation of piperazine and its structural analogs. Energy Procedia, 2011, 4, 43-50. | 1.8 | 40 |
| 75 | Absorption of CO2in Aqueous Diglycolamine. Industrial & Engineering Chemistry Research, 2006, 45, 2473-2482. | 1.8 | 38 |
| 76 | Density and Viscosity of Aqueous (Piperazine + Carbon Dioxide) Solutions. Journal of Chemical & Engineering Data, 2011, 56, 574-581. | 1.0 | 38 |
| 77 | Modeling pilot plant results for CO2 capture by aqueous piperazine. Energy Procedia, 2011, 4, 1593-1600. | 1.8 | 38 |
| 78 | Limestone dissolution in stack gas desulfurization. A mass-transfer model is shown to predict the the measured dissolution rates with less than 30% error. Environmental Progress, 1982, 1, 52-58. | 0.8 | 37 |
| 79 | Pilot plant demonstration of piperazine with the advanced flash stripper. International Journal of Greenhouse Gas Control, 2019, 84, 72-81. | 2.3 | 37 |
| 80 | Nitrosamine Formation in Amine Scrubbing at Desorber Temperatures. Environmental Science & Technology, 2014, 48, 8777-8783. | 4.6 | 36 |
| 81 | Thermodynamic modeling of piperazine/2-aminomethylpropanol/CO2/water. Chemical Engineering Science, 2014, 117, 331-341. | 1.9 | 36 |
| 82 | Effectiveness of absorber intercooling for CO 2 absorption from natural gas fired flue gases using monoethanolamine solvent. International Journal of Greenhouse Gas Control, 2017, 58, 246-255. | 2.3 | 36 |
| 83 | CO2 absorption rate in biphasic solvent of aminoethylethanolamine and diethylethanolamine. Chemical Engineering Journal, 2021, 404, 126503. | 6.6 | 36 |
| 84 | Dry Absorption of HCL and SO2with Hydrated Lime from Humidified Flue Gas. Industrial & Engineering Chemistry Research, 1999, 38, 4068-4080. | 1.8 | 35 |
| 85 | Absorber Intercooling Configurations using Aqueous Piperazine for Capture from Sources with 4 to 27% CO2. Energy Procedia, 2014, 63, 1637-1656. | 1.8 | 35 |
| 86 | Piperazine/4-hydroxy-1-methylpiperidine for CO2 capture. Chemical Engineering Journal, 2017, 307, 258-263. | 6.6 | 35 |
| 87 | Oxidative Degradation of Amines With High-Temperature Cycling. Energy Procedia, 2013, 37, 2118-2132. | 1.8 | 34 |
| 88 | Liquid-phase mass transfer in spray contactors. AIChE Journal, 2003, 49, 2363-2373. | 1.8 | 33 |
| 89 | Regulatory Control of Amine Scrubbing for CO<sub>2</sub> Capture from Power Plants. Industrial & Engineering Chemistry Research, 2016, 55, 4646-4657. | 1.8 | 33 |
| 90 | Products and process variables in oxidation of monoethanolamine for CO2 capture. International Journal of Greenhouse Gas Control, 2013, 12, 472-477. | 2.3 | 32 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Effect of Liquid Viscosity on the Liquid Phase Mass Transfer Coefficient of Packing. Energy Procedia, 2014, 63, 1268-1286. | 1.8 | 32 |
| 92 | CO2 absorption rate and capacity of semi-aqueous piperazine for CO2 capture. International Journal of Greenhouse Gas Control, 2019, 85, 182-186. | 2.3 | 32 |
| 93 | Demonstration of 99% CO2 removal from coal flue gas by amine scrubbing. International Journal of Greenhouse Gas Control, 2019, 83, 236-244. | 2.3 | 32 |
| 94 | Oxidation of amines at absorber conditions for CO2 capture from flue gas. Energy Procedia, 2011, 4, 171-178. | 1.8 | 30 |
| 95 | Volatility of amines for CO 2 capture. International Journal of Greenhouse Gas Control, 2017, 58, 1-9. | 2.3 | 30 |
| 96 | Lost work: A comparison of water-lean solvent to a second generation aqueous amine process for CO2 capture. International Journal of Greenhouse Gas Control, 2019, 84, 82-90. | 2.3 | 29 |
| 97 | Aqueous Piperazine/N-(2-Aminoethyl) Piperazine for CO2 Capture. Energy Procedia, 2013, 37, 1621-1638. | 1.8 | 28 |
| 98 | Energy Performance of Advanced Reboiled and Flash Stripper Configurations for CO<sub>2</sub> Capture Using Monoethanolamine. Industrial & Engineering Chemistry Research, 2016, 55, 4622-4631. | 1.8 | 28 |
| 99 | Mercury Absorption in Aqueous Oxidants Catalyzed by Mercury(II). Industrial & Engineering Chemistry Research, 1998, 37, 380-387. | 1.8 | 27 |
| 100 | Rate-based modeling and economic optimization of next-generation amine-based carbon capture plants. Applied Energy, 2019, 252, 113379. | 5.1 | 27 |
| 101 | Removal of SO<sub>2</sub>and NO<sub>X</sub>from Stack Gas by Reaction with Calcium Hydroxide Solids. Japca, 1989, 39, 175-179. | 0.3 | 26 |
| 102 | Limestone Dissolution in Flue Gas Scrubbing: Effect of Sulfite. Journal of the Air and Waste Management Association, 1992, 42, 926-935. | 0.2 | 26 |
| 103 | Modeling piperazine thermodynamics. Energy Procedia, 2011, 4, 35-42. | 1.8 | 26 |
| 104 | Aqueous 3-(methylamino)propylamine for CO2 capture. International Journal of Greenhouse Gas Control, 2013, 15, 70-77. | 2.3 | 26 |
| 105 | Modeling Aerosols in Amine-based CO2 Capture. Energy Procedia, 2013, 37, 1706-1719. | 1.8 | 26 |
| 106 | Packing Characterization: Mass Transfer Properties. Energy Procedia, 2012, 23, 23-32. | 1.8 | 25 |
| 107 | Thermal degradation of novel piperazine-based amine blends for CO 2 capture. International Journal of Greenhouse Gas Control, 2016, 49, 239-249. | 2.3 | 25 |
| 108 | Inhibitors of Monoethanolamine Oxidation in CO<sub>2</sub> Capture Processes. Industrial & Engineering Chemistry Research, 2014, 53, 16222-16228. | 1.8 | 24 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Pilotâ€scale parametric evaluation of concentrated piperazine for CO<sub>2</sub> capture at an Australian coalâ€fired power station. , 2015, 5, 7-16. | | 24 |
| 110 | Dynamic modeling and control of an intercooled absorber for post-combustion CO2 capture. Chemical Engineering and Processing: Process Intensification, 2016, 107, 1-10. | 1.8 | 24 |
| 111 | Absorber modeling for NGCC carbon capture with aqueous piperazine. Faraday Discussions, 2016, 192, 459-477. | 1.6 | 24 |
| 112 | Nitrogen Dioxide Reaction with Alkaline Solids. Industrial & Engineering Chemistry Research, 1996, 35, 999-1005. | 1.8 | 23 |
| 113 | Modeling of CO<sub>2</sub> Absorption Kinetics in Aqueous 2-Methylpiperazine. Industrial & Engineering Chemistry Research, 2013, 52, 4239-4248. | 1.8 | 23 |
| 114 | Reaction kinetics of carbon dioxide and hydroxide in aqueous glycerol. Chemical Engineering Science, 2017, 161, 151-158. | 1.9 | 23 |
| 115 | Absorption of Nitrogen Oxides in Aqueous Amines. Energy Procedia, 2014, 63, 830-847. | 1.8 | 22 |
| 116 | Modeling pilot plant results for CO2 stripping using piperazine in two stage flash. Energy Procedia, 2013, 37, 386-399. | 1.8 | 21 |
| 117 | Dimensionless Models for Predicting the Effective Area, Liquid-Film, and Gas-Film Mass-Transfer Coefficients of Packing. Industrial & Engineering Chemistry Research, 2016, 55, 5373-5384. | 1.8 | 21 |
| 118 | Optimum heat of absorption for CO 2 capture using the advanced flash stripper. International Journal of Greenhouse Gas Control, 2016, 53, 169-177. | 2.3 | 21 |
| 119 | Control Relevant Model of Amine Scrubbing for CO<sub>2</sub> Capture from Power Plants. Industrial & Engineering Chemistry Research, 2016, 55, 1690-1700. | 1.8 | 21 |
| 120 | Modeling of absorber pilot plant performance for CO2 capture with aqueous piperazine. International Journal of Greenhouse Gas Control, 2017, 64, 300-313. | 2.3 | 21 |
| 121 | Zero- and negative-emissions fossil-fired power plants using CO2 capture by conventional aqueous amines. International Journal of Greenhouse Gas Control, 2021, 111, 103473. | 2.3 | 21 |
| 122 | Thermodynamics and Equilibrium Solubility of Carbon Dioxide in Diglycolamine/Morpholine/Water. Journal of Chemical & Engineering Data, 2006, 51, 708-717. | 1.0 | 20 |
| 123 | Absorption ofCO2in aqueous blends of diglycolamineÂ®and morpholine. Chemical Engineering Science, 2006, 61, 3830-3837. | 1.9 | 20 |
| 124 | Thermodynamics of CO<sub>2</sub>/2-Methylpiperazine/Water. Industrial & Engineering Chemistry Research, 2013, 52, 4229-4238. | 1.8 | 20 |
| 125 | Pilot-scale evaluation of concentrated piperazine for CO2 capture at an Australian coal-fired power station: Nitrosamine measurements. International Journal of Greenhouse Gas Control, 2015, 37, 256-263. | 2.3 | 20 |
| 126 | Hg absorption in aqueous permanganate. AICHE Journal, 1996, 42, 3559-3562. | 1.8 | 19 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Modeling CO2 absorption into concentrated aqueous monoethanolamine and piperazine. Chemical Engineering Science, 2011, 66, 5212-5218. | 1.9 | 19 |
| 128 | Optimal CO2 Capture Operation in an Advanced Electric Grid. Energy Procedia, 2013, 37, 2585-2594. | 1.8 | 19 |
| 129 | Modeling of pilot stripper results for CO2 capture by aqueous piperazine. International Journal of Greenhouse Gas Control, 2013, 12, 280-287. | 2.3 | 19 |
| 130 | Thermal Degradation of Linear Amines for CO2 Capture. Energy Procedia, 2014, 63, 1558-1568. | 1.8 | 19 |
| 131 | Maximizing coal-fired power plant efficiency with integration of amine-based CO2 capture in greenfield and retrofit scenarios. Energy, 2014, 72, 824-831. | 4.5 | 19 |
| 132 | Calcium sulfite hemihydrate: Crystal growth rate and crystal habit. Environmental Progress, 1986, 5, 5-11. | 0.8 | 18 |
| 133 | Preparation of Calcium Silicate Absorbent from Iron Blast Furnace Slag. Journal of the Air and Waste Management Association, 2000, 50, 1655-1662. | 0.9 | 18 |
| 134 | CO<sub>2</sub> Absorption from Gas Turbine Flue Gas by Aqueous Piperazine with Intercooling. Industrial & Engineering Chemistry Research, 2020, 59, 7174-7181. | 1.8 | 18 |
| 135 | Approximate simulation of CO2 and H2s absorption into aqueous alkanolamines. AICHE Journal, 1993, 39, 1389-1397. | 1.8 | 17 |
| 136 | Thermal Decomposition of N-nitrosopiperazine. Energy Procedia, 2013, 37, 1678-1686. | 1.8 | 17 |
| 137 | Pilot Plant Activities with Concentrated Piperazine. Energy Procedia, 2014, 63, 1376-1391. | 1.8 | 17 |
| 138 | NO<sub>2</sub>-Catalyzed Sulfite Oxidation. Industrial & Engineering Chemistry Research, 2015, 54, 4815-4822. | 1.8 | 17 |
| 139 | Thermodynamic and Mass-Transfer Modeling of Carbon Dioxide Absorption into Aqueous 2-Amino-2-Methyl-1-Propanol. Industrial & Engineering Chemistry Research, 2017, 56, 319-330. | 1.8 | 17 |
| 140 | Pilot testing of a heat integrated 0.7 MWe CO2 capture system with two-stage air-stripping: Emission. International Journal of Greenhouse Gas Control, 2017, 64, 267-275. | 2.3 | 17 |
| 141 | Effect of Liquid Viscosity on Mass Transfer Area and Liquid Film Mass Transfer Coefficient for GT-OPTIMPAK 250Y. Energy Procedia, 2017, 114, 2713-2727. | 1.8 | 17 |
| 142 | Thermal Degradation of Piperazine Blends with Diamines. Energy Procedia, 2013, 37, 1904-1911. | 1.8 | 16 |
| 143 | Pilot Plant Results with Piperazine. Energy Procedia, 2013, 37, 1572-1583. | 1.8 | 16 |
| 144 | Nitrosamine formation and mitigation in blended amines for CO 2 capture. International Journal of Greenhouse Gas Control, 2015, 39, 329-334. | 2.3 | 16 |

| # | Article | IF | Citations |
|---|---|---|---|
| 145 | Thermodynamic and mass transfer modeling of carbon dioxide absorption into aqueous 2-piperidineethanol. Chemical Engineering Science, 2016, 153, 295-307. | 1.9 | 16 |
| 146 | Characterization of Novel Structured Packings for CO2 Capture. Energy Procedia, 2013, 37, 2145-2153. | 1.8 | 15 |
| 147 | Energy Performance of Advanced Stripper Configurations. Energy Procedia, 2013, 37, 1696-1705. | 1.8 | 15 |
| 148 | Two-Stage Flash for CO2 Regeneration: Dynamic Modeling and Pilot Plant Validation. Energy Procedia, 2013, 37, 2133-2144. | 1.8 | 15 |
| 149 | Absorber intercooling in CO<sub>2</sub> absorption by piperazineâ€promoted potassium carbonate. AIChE Journal, 2010, 56, 905-914. | 1.8 | 14 |
| 150 | Modeling Pilot Plant Performance of an Absorber with Aqueous Piperazine. Energy Procedia, 2013, 37, 1987-2001. | 1.8 | 14 |
| 151 | Carbon Capture with 4 m Piperazine/4 m 2-Methylpiperazine. Energy Procedia, 2013, 37, 436-447. | 1.8 | 14 |
| 152 | Absorption rates and CO2 solubility in new piperazine blends. Energy Procedia, 2013, 37, 370-385. | 1.8 | 14 |
| 153 | Managing n-nitrosopiperazine and dinitrosopiperazine. Energy Procedia, 2013, 37, 273-284. | 1.8 | 14 |
| 154 | CO2 Mass Transfer and Solubility in Aqueous Primary and Secondary Amine. Energy Procedia, 2014, 63, 1487-1496. | 1.8 | 14 |
| 155 | MEA and Piperazine Corrosion of Carbon Steel and Stainless Steel. Energy Procedia, 2017, 114, 1751-1764. | 1.8 | 14 |
| 156 | Effects of Viscosity on CO2 Absorption in Aqueous Piperazine/2-methylpiperazine. Energy Procedia, 2017, 114, 2103-2120. | 1.8 | 14 |
| 157 | Nitrogen Dioxide Absorption and Sulfide Oxidation in Aqueous Sulfide. Journal of the Air and Waste Management Association, 1999, 49, 332-338. | 0.9 | 13 |
| 158 | Absorption of HCl and SO2from Humidified Flue Gas with Calcium Silicate Solids. Industrial & Engineering Chemistry Research, 2000, 39, 1048-1060. | 1.8 | 13 |
| 159 | Oxidative Degradation of Amine Solvents for CO2 Capture. Energy Procedia, 2014, 63, 1546-1557. | 1.8 | 13 |
| 160 | Pilot plant results with the piperazine advanced stripper at NGCC conditions. International Journal of Greenhouse Gas Control, 2022, 113, 103551. | 2.3 | 13 |
| 161 | Packing characterization: Absorber economic analysis. International Journal of Greenhouse Gas Control, 2015, 42, 124-131. | 2.3 | 12 |
| 162 | Modeling Amine Aerosol Growth at Realistic Pilot Plant Conditions. Energy Procedia, 2017, 114, 1045-1060. | 1.8 | 12 |

| # | Article | IF | Citations |
|---|---|---|---|
| 163 | Review of Recent Pilot Plant Activities with Concentrated Piperazine. Energy Procedia, 2017, 114, 1110-1127. | 1.8 | 12 |
| 164 | Cold Rich Bypass to Strippers for CO<sub>2</sub> Capture by Concentrated Piperazine. Chemical Engineering and Technology, 2014, 37, 149-156. | 0.9 | 11 |
| 165 | Pilotâ€scale evaluation of concentrated piperazine for CO<sub>2</sub> capture at an Australian coalâ€fired power station: duration experiments. , 2015, 5, 363-373. | | 11 |
| 166 | Regeneration Design for NGCC CO2 Capture with Amine-only and Hybrid Amine/Membrane. Energy Procedia, 2017, 114, 1394-1408. | 1.8 | 11 |
| 167 | Effect of limestone type and grind on SO2 scrubber performance. The cost-reduction effect of finer limestone grinding on SO2 scrubber efficiency can be very considerable. Environmental Progress, 1982, 1, 59-65. | 0.8 | 9 |
| 168 | Thermodynamic Modeling of Aqueous Piperazine/N-(2-Aminoethyl) Piperazine for CO2 Capture. Energy Procedia, 2014, 63, 997-1017. | 1.8 | 9 |
| 169 | Piperazine aerosol mitigation for post-combustion carbon capture. International Journal of Greenhouse Gas Control, 2019, 91, 102845. | 2.3 | 9 |
| 170 | Volatility of 2-(diethylamino)-ethanol and 2-((2-aminoethyl) amino) ethanol, a biphasic solvent for CO2 capture. International Journal of Greenhouse Gas Control, 2021, 106, 103257. | 2.3 | 9 |
| 171 | Preparation of calcium silicate absorbent from recycled glass. Environmental Progress, 1998, 17, 86-91. | 0.8 | 8 |
| 172 | Effect of mixing on efficiencies for reactive tray contactors. AICHE Journal, 2002, 48, 2537-2544. | 1.8 | 7 |
| 173 | Chlorine Absorption in Sulfite Solutions. Separation Science and Technology, 2004, 39, 3057-3077. | 1.3 | 7 |
| 174 | Piperazine/N-methylpiperazine/N,Nâ€™-dimethylpiperazine as an Aqueous Solvent for Carbon Dioxide Capture. Oil and Gas Science and Technology, 2014, 69, 903-914. | 1.4 | 7 |
| 175 | Quantification of Gas and Aerosol-phase Piperazine Emissions by FTIR Under Variable Bench-scale Absorber Conditions. Energy Procedia, 2014, 63, 871-883. | 1.8 | 7 |
| 176 | Modeling Amine Aerosol Growth in the Absorber and Water Wash. Energy Procedia, 2017, 114, 959-976. | 1.8 | 7 |
| 177 | Effect of Deliquescent Salt Additives on the Reaction of SO2 with Ca(OH)2. ACS Symposium Series, 1986, , 208-222. | 0.5 | 6 |
| 178 | Optimization of Stripping Piperazine with Variable Rich Loading. Energy Procedia, 2014, 63, 1842-1853. | 1.8 | 6 |
| 179 | Absorber Performance with High CO2. Energy Procedia, 2014, 63, 1329-1338. | 1.8 | 6 |
| 180 | Corrosion by Aqueous Piperazine at 40â€“150 Â°C in Pilot Testing of CO<sub>2</sub> Capture. Industrial & Engineering Chemistry Research, 2020, 59, 7189-7197. | 1.8 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 181 | Creative absorber design and optimization for CO2 capture with aqueous piperazine. International Journal of Greenhouse Gas Control, 2022, 113, 103534. | 2.3 | 6 |
| 182 | CCS â€" A technology for now: general discussion. Faraday Discussions, 2016, 192, 125-151. | 1.6 | 5 |
| 183 | Comment on â€œReassessing the Efficiency Penalty from Carbon Capture in Coal-Fired Power Plantsâ€. Environmental Science & Technology, 2016, 50, 6112-6113. | 4.6 | 5 |
| 184 | Amine Aerosol Characterization by Phase Doppler Interferometry. Energy Procedia, 2017, 114, 939-951. | 1.8 | 5 |
| 185 | Heat Transfer Enhancement and Optimization of Lean/Rich Solvent Cross Exchanger for Amine Scrubbing. Energy Procedia, 2017, 114, 1890-1903. | 1.8 | 5 |
| 186 | Corrosion of carbon steel by aqueous piperazine protected by FeCO3. International Journal of Greenhouse Gas Control, 2019, 85, 23-29. | 2.3 | 5 |
| 187 | FEED for Piperazine with the Advanced Stripperâ„¢ on NGCC at Denver City, Texas. SSRN Electronic Journal, 0, , . | 0.4 | 5 |
| 188 | Dynamic Modeling, Validation, and Time Scale Decomposition of an Advanced Post-combustion Amine Scrubbing Process. Energy Procedia, 2014, 63, 1296-1307. | 1.8 | 4 |
| 189 | Effects of Catalysts, Inhibitors, and Contaminants on Piperazine Oxidation. Energy Procedia, 2017, 114, 1919-1929. | 1.8 | 4 |
| 190 | Demonstrating solvent management technologies for an aqueous AMP/PZ solvent. SSRN Electronic Journal, 0, , . | 0.4 | 4 |
| 191 | Process design of the piperazine advanced stripper for a 460 MW NGCC. International Journal of Greenhouse Gas Control, 2022, 115, 103631. | 2.3 | 4 |
| 192 | Oxidation of Aqueous Piperazine: Oxidation Rates, Products, and High-Temperature Oxidation. ACS Symposium Series, 2012, , 219-237. | 0.5 | 3 |
| 193 | Thermally Degraded DiglycolamineÂ®/Dimethylaminoethoxyethanol for CO2 Capture. Energy Procedia, 2017, 114, 1737-1750. | 1.8 | 3 |
| 194 | CO2 Absorption Rate and Solubility in Monoethanolamine/Piperazine/Water. , 0, . |  | 3 |
| 195 | Effects of carbon treating on piperazine oxidation in pilot plant testing of PZASâ„¢. International Journal of Greenhouse Gas Control, 2021, 112, 103502. | 2.3 | 3 |
| 196 | Sulfur Dioxide Vapor Pressure and pH of Sodium Citrate Buffer Solutions with Dissolved Sulfur Dioxide. ACS Symposium Series, 1980, , 269-291. | 0.5 | 2 |
| 197 | The Impact of Electricity Market Conditions on the Value of Flexible CO2 Capture. , 2012, , . |  | 2 |
| 198 | Thermodynamic and Kinetic Modeling of Piperazine/2-Methylpiperazine. Energy Procedia, 2014, 63, 1243-1255. | 1.8 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 199 | Thermal Degradation of Piperazine/4-Hydroxy-1-methylpiperidine for CO<sub>2</sub> Capture. Industrial & Engineering Chemistry Research, 2016, 55, 10004-10010. | 1.8 | 2 |
| 200 | Thermal Degradation of Aminosilicone Carbamates. Energy & Fuels, 2016, 30, 10671-10678. | 2.5 | 2 |
| 201 | Process control of the advanced flash stripper for CO2 solvent regeneration. Chemical Engineering and Processing: Process Intensification, 2016, 107, 21-28. | 1.8 | 2 |
| 202 | Field Measurement of Amine Aerosol by FTIR and Phase Doppler Interferometry. Energy Procedia, 2017, 114, 906-929. | 1.8 | 2 |
| 203 | Pilot Plant Results With the Piperazine Advanced Stripper at NGCC Conditions. SSRN Electronic Journal, 0, , . | 0.4 | 2 |
| 204 | Activity Coefficients Predicted by the Local Composition Model for Aqueous Solutions Used in Flue Gas Desulfurization. ACS Symposium Series, 1986, , 223-233. | 0.5 | 1 |
| 205 | Subspace system identification for CO<inf>2</inf> recovery processes. , 2011, , . | | 1 |
| 206 | Heat Loss and Energy Use in Pilot Plant Testing of Piperazine With the Advanced Stripper. SSRN Electronic Journal, 0, , . | 0.4 | 1 |
| 207 | CO2 Absorption Rate and Capacity of Semi-Aqueous Piperazine for CO2 Capture. SSRN Electronic Journal, 0, , . | 0.4 | 1 |
| 208 | Fe2+ Solubility and Siderite Formation in Monoethanolamine and Piperazine Solvents. SSRN Electronic Journal, 0, , . | 0.4 | 1 |
| 209 | Energy use of piperazine with the advanced stripper from pilot plant testing. International Journal of Greenhouse Gas Control, 2022, 113, 103531. | 2.3 | 1 |
| 210 | Diethylenetriamine solutions for stack gas desulfurization by absorption/stripping. Drastic reductions in steam consumption can be realized in a simple absorption/stripping process. Environmental Progress, 1982, 1, 160-167. | 0.8 | 0 |
| 211 | Modeling CO<inf>2</inf> recovery for optimal dynamic operations. , 2011, , . | | 0 |
| 212 | Control of carbon dioxide solubility in aqueous piperazine. Computers and Chemical Engineering, 2013, 54, 122-124. | 2.0 | 0 |
| 213 | An effective multi-loop control system to improve control performance of CO<inf>2</inf> capture. , 2013, , . | | 0 |
| 214 | Advancing CO2 Capture from Natural Gas Combined Cycle Power Plants with Piperazine Scrubbing. SSRN Electronic Journal, 0, , . | 0.4 | 0 |