

# Jonggeol Na

## List of Publications by Year in descending order

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53  
papers

1,485  
citations

394286

19  
h-index

330025

37  
g-index

55  
all docs

55  
docs citations

55  
times ranked

1459  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Catalystâ€™electrolyte interface chemistry for electrochemical CO <sub>2</sub> reduction. Chemical Society Reviews, 2020, 49, 6632-6665.  | 18.7 | 234       |
| 2  | General technoeconomic analysis for electrochemical coproduction coupling carbon dioxide reduction with organic oxidation. Nature Communications, 2019, 10, 5193.                                   | 5.8  | 219       |
| 3  | Electrocatalytic Reduction of Low Concentrations of CO <sub>2</sub> Gas in a Membrane Electrode Assembly Electrolyzer. ACS Energy Letters, 2021, 6, 3488-3495.                                      | 8.8  | 73        |
| 4  | Multi-objective Bayesian optimization of chemical reactor design using computational fluid dynamics. Computers and Chemical Engineering, 2018, 119, 25-37.  | 2.0  | 62        |
| 5  | Mass Transport Control by Surface Graphene Oxide for Selective CO Production from Electrochemical CO <sub>2</sub> Reduction. ACS Catalysis, 2020, 10, 3222-3231.                                    | 5.5  | 57        |
| 6  | An experimental based optimization of a novel water lean amine solvent for post combustion CO <sub>2</sub> capture process. Applied Energy, 2019, 248, 174-184.                                     | 5.1  | 49        |
| 7  | Risk-based underground pipeline safety management considering corrosion effect. Journal of Hazardous Materials, 2018, 342, 279-289.   | 6.5  | 45        |
| 8  | Adversarial Autoencoder Based Feature Learning for Fault Detection in Industrial Processes. IEEE Transactions on Industrial Informatics, 2022, 18, 827-834.   | 7.2  | 44        |
| 9  | Efficient Discovery of Active, Selective, and Stable Catalysts for Electrochemical H <sub>2</sub> O <sub>2</sub> Synthesis through Active Motif Screening. ACS Catalysis, 2021, 11, 2483-2491.      | 5.5  | 44        |
| 10 | Toxic gas release modeling for real-time analysis using variational autoencoder with convolutional neural networks. Chemical Engineering Science, 2018, 181, 68-78.                                 | 1.9  | 43        |
| 11 | A modified DIRECT algorithm for hidden constraints in an LNG process optimization. Energy, 2017, 126, 488-500.  | 4.5  | 41        |
| 12 | Towards the Large-Scale Electrochemical Reduction of Carbon Dioxide. Catalysts, 2021, 11, 253.  | 1.6  | 41        |
| 13 | Multi-objective optimization of microchannel reactor for Fischer-Tropsch synthesis using computational fluid dynamics and genetic algorithm. Chemical Engineering Journal, 2017, 313, 1521-1534.    | 6.6  | 39        |
| 14 | Origin of Hydrogen Incorporated into Ethylene during Electrochemical CO <sub>2</sub> Reduction in Membrane Electrode Assembly. ACS Energy Letters, 2022, 7, 939-945.                                | 8.8  | 36        |
| 15 | Machine learning-based utilization of renewable power curtailments under uncertainty by planning of hydrogen systems and battery storages. Journal of Energy Storage, 2021, 41, 103010.             | 3.9  | 33        |
| 16 | Deep Neural Network-based Optimization Framework for Safety Evacuation Route during Toxic Gas Leak Incidents. Reliability Engineering and System Safety, 2022, 218, 108102.                         | 5.1  | 30        |
| 17 | Generative Chemical Transformer: Neural Machine Learning of Molecular Geometric Structures from Chemical Language via Attention. Journal of Chemical Information and Modeling, 2021, 61, 5804-5814. | 2.5  | 23        |
| 18 | Simultaneous synthesis of a heat exchanger network with multiple utilities using utility substages. Computers and Chemical Engineering, 2015, 79, 70-79.  | 2.0  | 22        |

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|----|--|-----|-----------|
| 19 | CFD Simulation of Microchannel Reactor Block for Fischer-Tropsch Synthesis: Effect of Coolant Type and Wall Boiling Condition on Reactor Temperature. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 543-554.  | 1.8 | 21        |
| 20 | Design methodology for mass transfer-enhanced large-scale electrochemical reactor for CO <sub>2</sub> reduction. <i>Chemical Engineering Journal</i> , 2021, 424, 130265.  | 6.6 | 21        |
| 21 | NARX modeling for real-time optimization of air and gas compression systems in chemical processes. <i>Computers and Chemical Engineering</i> , 2018, 115, 262-274.   | 2.0 | 19        |
| 22 | Design of microchannel Fischer-Tropsch reactor using cell-coupling method: Effect of flow configurations and distribution. <i>Chemical Engineering Science</i> , 2016, 143, 63-75.   | 1.9 | 17        |
| 23 | Computational Fluid Dynamics Based Optimal Design of Guiding Channel Geometry in U-Type Coolant Layer Manifold of Large-Scale Microchannel Fischer-Tropsch Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 505-515.  | 1.8 | 17        |
| 24 | Optimal operation strategy of batch vacuum distillation for sulfuric acid recycling process. <i>Computers and Chemical Engineering</i> , 2014, 71, 104-115.  | 2.0 | 16        |
| 25 | Microenvironments of Cu catalysts in zero-gap membrane electrode assembly for efficient CO <sub>2</sub> electrolysis to C <sub>2+</sub> products. <i>Journal of Materials Chemistry A</i> , 2022, 10, 10363-10372.   | 5.2 | 16        |
| 26 | Design and modeling of large-scale cross-current multichannel Fischer-Tropsch reactor using channel decomposition and cell-coupling method. <i>Chemical Engineering Science</i> , 2015, 134, 448-456.  | 1.9 | 14        |
| 27 | Robust design of ambient-air vaporizer based on time-series clustering. <i>Computers and Chemical Engineering</i> , 2018, 118, 236-247.  | 2.0 | 14        |
| 28 | Data-driven robust optimization for minimum nitrogen oxide emission under process uncertainty. <i>Chemical Engineering Journal</i> , 2022, 428, 130971.  | 6.6 | 14        |
| 29 | Physics-informed deep learning for data-driven solutions of computational fluid dynamics. <i>Korean Journal of Chemical Engineering</i> , 2022, 39, 515-528.   | 1.2 | 13        |
| 30 | Comparative Study of Process Integration and Retrofit Design of a Liquefied Natural Gas (LNG) Regasification Process Based on Exergy Analyses: A Case Study of an LNG Regasification Process in South Korea. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 14366-14376. | 1.8 | 12        |
| 31 | Multicompartment Model of an Ethylene-Vinyl Acetate Autoclave Reactor: A Combined Computational Fluid Dynamics and Polymerization Kinetics Model. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 16459-16471.  | 1.8 | 12        |
| 32 | Data-driven pilot optimization for electrochemical CO mass production. <i>Journal of Materials Chemistry A</i> , 2020, 8, 16943-16950.   | 5.2 | 12        |
| 33 | In silico discovery of active, stable, CO-tolerant and cost-effective electrocatalysts for hydrogen evolution and oxidation. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 19454-19458.   | 1.3 | 12        |
| 34 | Modeling and validation of a pilot-scale aqueous mineral carbonation reactor for carbon capture using computational fluid dynamics. <i>Chemical Engineering Science</i> , 2018, 177, 301-312.  | 1.9 | 11        |
| 35 | Bayesian Inference of Aqueous Mineral Carbonation Kinetics for Carbon Capture and Utilization. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 8246-8259.   | 1.8 | 11        |
| 36 | Bayesian optimization of industrial-scale toluene diisocyanate liquid-phase jet reactor with 3-D computational fluid dynamics model. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 98, 327-339.   | 2.9 | 10        |

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|----|--|-----|-----------|
| 37 | Learning the properties of a water-lean amine solvent from carbon capture pilot experiments. Applied Energy, 2021, 283, 116213.  | 5.1 | 9         |
| 38 | CFD modeling for the prediction of molecular weight distribution in the LDPE autoclave reactor: Effects of non-ideal mixing. Chemical Engineering Journal, 2022, 427, 131829.  | 6.6 | 9         |
| 39 | Development of surrogate model using CFD and deep neural networks to optimize gas detector layout. Korean Journal of Chemical Engineering, 2019, 36, 325-332.  | 1.2 | 8         |
| 40 | Toward the practical application of direct CO <sub>2</sub> hydrogenation technology for methanol production. International Journal of Energy Research, 2020, 44, 8781-8798.  | 2.2 | 8         |
| 41 | Optimal design of a large scale Fischer-Tropsch microchannel reactor module using a cell-coupling method. Fuel Processing Technology, 2017, 159, 448-459.  | 3.7 | 7         |
| 42 | Computational Fluid Dynamics Study of Channel Geometric Effect for Fischer-Tropsch Microchannel Reactor. Korean Chemical Engineering Research, 2014, 52, 826-833.  | 0.2 | 7         |
| 43 | Optimal design and operation of Fischer-Tropsch microchannel reactor for pilot-scale compact Gas-to-Liquid process. Chemical Engineering and Processing: Process Intensification, 2018, 128, 63-76.  | 1.8 | 6         |
| 44 | Efficient Bayesian inference using adversarial machine learning and low-complexity surrogate models. Computers and Chemical Engineering, 2021, 151, 107322.  | 2.0 | 6         |
| 45 | Design of carbon dioxide dehydration process using derivative-free superstructure optimization. Chemical Engineering Research and Design, 2018, 129, 344-355.  | 2.7 | 5         |
| 46 | Clustered Manifold Approximation and Projection for Semisupervised Fault Diagnosis and Process Monitoring. Industrial & Engineering Chemistry Research, 2021, 60, 9521-9531.   | 1.8 | 5         |
| 47 | Simultaneous Optimization Models for Heat Exchanger Network Synthesis with Multiple Utilities: A New Strategy by Using Utility Sub-stage. Computer Aided Chemical Engineering, 2014, 33, 1675-1680.  | 0.3 | 4         |
| 48 | CO <sub>2</sub> Mineral Carbonation Reactor Analysis using Computational Fluid Dynamics: Internal Reactor Design Study for the Efficient Mixing of Solid Reactants in the Solution. Korean Chemical Engineering Research, 2016, 54, 612-620. | 0.2 | 4         |
| 49 | Optimal Design of an Ambient Air Vaporizer using Numerical Model and DIRECT Algorithm. Computer Aided Chemical Engineering, 2018, , 1795-1800.   | 0.3 | 3         |
| 50 | Bayesian Optimization of Semicontinuous Carbonation Process Operation Recipe. Industrial & Engineering Chemistry Research, 2021, 60, 9871-9884.  | 1.8 | 2         |
| 51 | Analysis on Thermal Effects of Process Channel Geometry for Microchannel Fischer-Tropsch Reactor Using Computational Fluid Dynamics. Korean Chemical Engineering Research, 2015, 53, 818-823.  | 0.2 | 2         |
| 52 | A Comparative Study of Various Fuel for Newly Optimized Onboard Fuel Processor System under the Simple Heat Exchanger Network. Korean Chemical Engineering Research, 2014, 52, 720-726.  | 0.2 | 2         |
| 53 | Adversarial Autoencoder Based Nonlinear Process Monitoring. Computer Aided Chemical Engineering, 2021, 50, 1195-1201.  | 0.3 | 1         |