Calvin Tsay

List of Publications by Year
in descending order

21	464	840776 11	752698 20
papers	citations	h-index	g-index

21	21	21	346
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optimal demand response scheduling of an industrial air separation unit using data-driven dynamic models. Computers and Chemical Engineering, 2019, 126, 22-34.	3.8	75
2	A simulation-based optimization framework for integrating scheduling and model predictive control, and its application to air separation units. Computers and Chemical Engineering, 2018, 113, 139-151.	3.8	67
3	The integration of scheduling and control: Top-down vs. bottom-up. Journal of Process Control, 2020, 91, 50-62.	3.3	41
4	A survey of optimal process design capabilities and practices in the chemical and petrochemical industries. Computers and Chemical Engineering, 2018, 112, 180-189.	3.8	31
5	110th Anniversary: Using Data to Bridge the Time and Length Scales of Process Systems. Industrial & Engineering Chemistry Research, 2019, 58, 16696-16708.	3.7	30
6	Rate-Based Process Optimization and Sensitivity Analysis for Ionic-Liquid-Based Post-Combustion Carbon Capture. ACS Sustainable Chemistry and Engineering, 2020, 8, 10242-10258.	6.7	29
7	Rate-based modeling and economic optimization of next-generation amine-based carbon capture plants. Applied Energy, 2019, 252, 113379.	10.1	27
8	Maximizing information from chemical engineering data sets: Applications to machine learning. Chemical Engineering Science, 2022, 252, 117469.	3.8	27
9	Equationâ€oriented simulation and optimization of process flowsheets incorporating detailed spiralâ€wound multistream heat exchanger models. AICHE Journal, 2017, 63, 3778-3789.	3.6	26
10	Integrating production scheduling and process control using latent variable dynamic models. Control Engineering Practice, 2020, 94, 104201.	5.5	26
11	A Dynamic Optimization Approach to Probabilistic Process Design under Uncertainty. Industrial & Engineering Chemistry Research, 2017, 56, 8606-8621.	3.7	15
12	Economic Optimization of Carbon Capture Processes Using Ionic Liquids: Toward Flexibility in Capture Rate and Feed Composition. ACS Sustainable Chemistry and Engineering, 2021, 9, 4823-4839.	6.7	12
13	Multi-objective constrained optimization for energy applications via tree ensembles. Applied Energy, 2022, 306, 118061.	10.1	11
14	Scenario-Free Optimal Design under Uncertainty of the PRICO Natural Gas Liquefaction Process. Industrial & Engineering Chemistry Research, 2018, 57, 5868-5880.	3.7	10
15	A superstructure-based design of experiments framework for simultaneous domain-restricted model identification and parameter estimation. Computers and Chemical Engineering, 2017, 107, 408-426.	3.8	9
16	Data-Driven Models and Algorithms for Demand Response Scheduling of Air Separation Units. Computer Aided Chemical Engineering, 2018, 44, 1273-1278.	0.5	8
17	Fast and efficient chemical process flowsheet simulation by pseudo-transient continuation on inertial manifolds. Computer Methods in Applied Mechanics and Engineering, 2019, 348, 935-953.	6.6	7
18	Sobolev trained neural network surrogate models for optimization. Computers and Chemical Engineering, 2021, 153, 107419.	3.8	7

#	Article	IF	Citations
19	Between Steps: Intermediate Relaxations Between Big-M and Convex Hull Formulations. Lecture Notes in Computer Science, 2021, , 299-314.	1.3	5
20	Identification and Online Updating of Dynamic Models for Demand Response of an Industrial Air Separation Unit. IFAC-PapersOnLine, 2021, 54, 140-145.	0.9	1
21	Non-Dimensional Feature Engineering and Data-Driven Modeling for Microchannel Reactor Control. IFAC-PapersOnLine, 2020, 53, 11295-11300.	0.9	0