ArturÂ M Schweidtmann

List of Publications by Year
in descending order

36	1,432	394421	345221
papers	citations	19 h-index	36 g-index

41	41	41	1154
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Obey validity limits of data-driven models through topological data analysis and one-class classification. Optimization and Engineering, 2022, 23, 855-876.	2.4	23
2	Multi-objective Bayesian optimisation of a two-step synthesis of p-cymene from crude sulphate turpentine. Chemical Engineering Science, 2022, 247, 116938.	3.8	15
3	HybridML: Open source platform for hybrid modeling. Computers and Chemical Engineering, 2022, 160, 107736.	3.8	12
4	Deterministic global optimization with Gaussian processes embedded. Mathematical Programming Computation, 2021, 13, 553-581.	4.8	25
5	Designing production-optimal alternative fuels for conventional, flexible-fuel, and ultra-high efficiency engines. Chemical Engineering Science, 2021, 237, 116562.	3.8	10
6	Efficient hybrid multiobjective optimization of pressure swing adsorption. Chemical Engineering Journal, 2021, 423, 130248.	12.7	20
7	Pushing nanomaterials up to the kilogram scale â€“ An accelerated approach for synthesizing antimicrobial ZnO with high shear reactors, machine learning and high-throughput analysis. Chemical Engineering Journal, 2021, 426, 131345.	12.7	15
8	Chemical data intelligence for sustainable chemistry. Chemical Society Reviews, 2021, 50, 12013-12036.	38.1	21
9	Machine Learning in Chemical Engineering: A Perspective. Chemie-Ingenieur-Technik, 2021, 93, 2029-2039.	0.8	87
10	Wavelet-based grid-adaptation for nonlinear scheduling subject to time-variable electricity prices. Computers and Chemical Engineering, 2020, 132, 106598.	3.8	9
11	Working fluid selection for organic rankine cycles via deterministic global optimization of design and operation. Optimization and Engineering, 2020, 21, 517-536.	2.4	15
12	Automated self-optimisation of multi-step reaction and separation processes using machine learning. Chemical Engineering Journal, 2020, 384, 123340.	12.7	97
13	Hybrid Mechanistic Data-Driven Modeling for the Deterministic Global Optimization of a Transcritical Organic Rankine Cycle. Computer Aided Chemical Engineering, 2020, , 1765-1770.	0.5	3
14	Modelling Circular Structures in Reaction Networks: Petri Nets and Reaction Network Flux Analysis. Computer Aided Chemical Engineering, 2020, , 1843-1848.	0.5	4
15	Globally optimal working fluid mixture composition for geothermal power cycles. Energy, 2020, 212, 118731.	8.8	9
16	Graph Neural Networks for Prediction of Fuel Ignition Quality. Energy & Fuels, 2020, 34, 11395-11407.	5.1	74
17	Nonlinear scheduling with timeâ€variable electricity prices using sensitivityâ€based truncations of wavelet transforms. AIChE Journal, 2020, 66, e16986.	3.6	6
18	The Potential of Hybrid Mechanistic/Dataâ€Driven Approaches for Reduced Dynamic Modeling: Application to Distillation Columns. Chemie-Ingenieur-Technik, 2020, 92, 1910-1920.	0.8	11

#	Article	IF	Citations
19	Multi-scale membrane process optimization with high-fidelity ion transport models through machine learning. Journal of Membrane Science, 2020, 608, 118208.	8.2	38
20	Deterministic global superstructure-based optimization of an organic Rankine cycle. Computers and Chemical Engineering, 2020, 141, 106996.	3.8	17
21	Simultaneous rational design of ion separation membranes and processes. Journal of Membrane Science, 2020, 600, 117860.	8.2	29
22	Deterministic Global Nonlinear Model Predictive Control with Neural Networks Embedded. IFAC-PapersOnLine, 2020, 53, 5273-5278.	0.9	9
23	Deterministic Global Process Optimization: Flash Calculations via Artificial Neural Networks. Computer Aided Chemical Engineering, 2019, , 937-942.	0.5	13
24	Impact of Accurate Working Fluid Properties on the Globally Optimal Design of an Organic Rankine Cycle. Computer Aided Chemical Engineering, 2019, , 427-432.	0.5	9
25	Machine learning and molecular descriptors enable rational solvent selection in asymmetric catalysis. Chemical Science, 2019, 10, 6697-6706.	7.4	84
26	Deterministic Global Optimization with Artificial Neural Networks Embedded. Journal of Optimization Theory and Applications, 2019, 180, 925-948.	1.5	132
27	Deterministic global process optimization: Accurate (single-species) properties via artificial neural networks. Computers and Chemical Engineering, 2019, 121, 67-74.	3.8	44
28	Rational design of ion separation membranes. Journal of Membrane Science, 2019, 569, 209-219.	8.2	46
29	Model-based bidding strategies on the primary balancing market for energy-intense processes. Computers and Chemical Engineering, 2019, 120, 4-14.	3.8	48
30	Efficient multiobjective optimization employing Gaussian processes, spectral sampling and a genetic algorithm. Journal of Global Optimization, 2018, 71, 407-438.	1.8	153
31	The concept of selectivity control by simultaneous distribution of the oxygen feed and wall temperature in a microstructured reactor. Chemical Engineering Journal, 2018, 331, 765-776.	12.7	6
32	Machine learning meets continuous flow chemistry: Automated optimization towards the Pareto front of multiple objectives. Chemical Engineering Journal, 2018, 352, 277-282.	12.7	221
33	Dynamic modeling and optimization of sustainable algal production with uncertainty using multivariate Gaussian processes. Computers and Chemical Engineering, 2018, 118, 143-158.	3.8	47
34	A Multiobjective Optimization Including Results of Life Cycle Assessment in Developing Biorenewablesâ€Based Processes. ChemSusChem, 2017, 10, 3632-3643.	6.8	31
35	Techno-economic Optimization of a Green-Field Post-Combustion CO₂ Capture Process Using Superstructure and Rate-Based Models. Industrial & Engineering Chemistry Research, 2016, 55, 12014-12026.	3.7	28
36	SKG4EOSC - Scholarly Knowledge Graphs for EOSC: Establishing a backbone of knowledge graphs for FAIR Scholarly Information in EOSC. Research Ideas and Outcomes, 0, 8, .	1.0	5