ArturÂ M Schweidtmann

List of Publications by Year
in descending order

36 papers	**1,432** citations	394421 **19** h-index	345221 **36** g-index
41 all docs	**41** docs citations	**41** times ranked	**1154** citing authors

#	Article	IF	Citations
1	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
2	Efficient multiobjective optimization employing Gaussian processes, spectral sampling and a genetic algorithm. Journal of Global Optimization, 2018, 71, 407-438.	1.8	153
3	Deterministic Global Optimization with Artificial Neural Networks Embedded. Journal of Optimization Theory and Applications, 2019, 180, 925-948.	1.5	132
4	Automated self-optimisation of multi-step reaction and separation processes using machine learning. Chemical Engineering Journal, 2020, 384, 123340.	12.7	97
5	Machine Learning in Chemical Engineering: A Perspective. Chemie-Ingenieur-Technik, 2021, 93, 2029-2039.	0.8	87
6	Machine learning and molecular descriptors enable rational solvent selection in asymmetric catalysis. Chemical Science, 2019, 10, 6697-6706.	7.4	84
7	Graph Neural Networks for Prediction of Fuel Ignition Quality. Energy & Fuels, 2020, 34, 11395-11407.	5.1	74
8	Model-based bidding strategies on the primary balancing market for energy-intense processes. Computers and Chemical Engineering, 2019, 120, 4-14.	3.8	48
9	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
10	Rational design of ion separation membranes. Journal of Membrane Science, 2019, 569, 209-219.	8.2	46
11	Deterministic global process optimization: Accurate (single-species) properties via artificial neural networks. Computers and Chemical Engineering, 2019, 121, 67-74.	3.8	44
12	Multi-scale membrane process optimization with high-fidelity ion transport models through machine learning. Journal of Membrane Science, 2020, 608, 118208.	8.2	38
13	A Multiobjective Optimization Including Results of Life Cycle Assessment in Developing Biorenewablesâ€Based Processes. ChemSusChem, 2017, 10, 3632-3643.	6.8	31
14	Simultaneous rational design of ion separation membranes and processes. Journal of Membrane Science, 2020, 600, 117860.	8.2	29
15	Techno-economic Optimization of a Green-Field Post-Combustion CO_2 Capture Process Using Superstructure and Rate-Based Models. Industrial & Engineering Chemistry Research, 2016, 55, 12014-12026.	3.7	28
16	Deterministic global optimization with Gaussian processes embedded. Mathematical Programming Computation, 2021, 13, 553-581.	4.8	25
17	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
18	Chemical data intelligence for sustainable chemistry. Chemical Society Reviews, 2021, 50, 12013-12036.	38.1	21

#	Article	IF	Citations
19	Efficient hybrid multiobjective optimization of pressure swing adsorption. Chemical Engineering Journal, 2021, 423, 130248.	12.7	20
20	Deterministic global superstructure-based optimization of an organic Rankine cycle. Computers and Chemical Engineering, 2020, 141, 106996.	3.8	17
21	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
22	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
23	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
24	Deterministic Global Process Optimization: Flash Calculations via Artificial Neural Networks. Computer Aided Chemical Engineering, 2019, , 937-942.	0.5	13
25	HybridML: Open source platform for hybrid modeling. Computers and Chemical Engineering, 2022, 160, 107736.	3.8	12
26	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
27	Designing production-optimal alternative fuels for conventional, flexible-fuel, and ultra-high efficiency engines. Chemical Engineering Science, 2021, 237, 116562.	3.8	10
28	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
29	Wavelet-based grid-adaptation for nonlinear scheduling subject to time-variable electricity prices. Computers and Chemical Engineering, 2020, 132, 106598.	3.8	9
30	Globally optimal working fluid mixture composition for geothermal power cycles. Energy, 2020, 212, 118731.	8.8	9
31	Deterministic Global Nonlinear Model Predictive Control with Neural Networks Embedded. IFAC-PapersOnLine, 2020, 53, 5273-5278.	0.9	9
32	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
33	Nonlinear scheduling with timeâ€variable electricity prices using sensitivityâ€based truncations of wavelet transforms. AICHE Journal, 2020, 66, e16986.	3.6	6
34	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
35	Modelling Circular Structures in Reaction Networks: Petri Nets and Reaction Network Flux Analysis. Computer Aided Chemical Engineering, 2020, , 1843-1848.	0.5	4
36	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