

Edwin Zondervan

List of Publications by Year in descending order

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Version: 2024-02-01

118
papers

1,797
citations

304368

22
h-index

301761

39
g-index

119
all docs

119
docs citations

119
times ranked

1840
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of different cleaning agents used for cleaning ultra filtration membranes fouled by surface water. <i>Journal of Membrane Science</i> , 2007, 304, 40-49.	4.1	157
2	Optimal design of a multi-product biorefinery system. <i>Computers and Chemical Engineering</i> , 2011, 35, 1752-1766.	2.0	144
3	Methanol production from captured CO ₂ using hydrogenation and reforming technologies_ environmental and economic evaluation. <i>Journal of CO₂ Utilization</i> , 2019, 34, 1-11.	3.3	100
4	Dynamic hydrogen production from PV & wind direct electricity supply – Modeling and techno-economic assessment. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29938-29952.	3.8	100
5	Methanol production by CO ₂ hydrogenation: Analysis and simulation of reactor performance. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 7915-7933.	3.8	90
6	Modeling alkaline water electrolysis for power-to-x applications: A scheduling approach. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 9303-9313.	3.8	84
7	A systematic framework for the feasibility and technical evaluation of reactive distillation processes. <i>Chemical Engineering and Processing: Process Intensification</i> , 2012, 60, 55-64.	1.8	64
8	An outlook towards hydrogen supply chain networks in 2050 – Design of novel fuel infrastructures in Germany. <i>Chemical Engineering Research and Design</i> , 2018, 134, 90-103.	2.7	63
9	Polyphenol extraction from fresh tea leaves by pulsed electric field: A study of mechanisms. <i>Chemical Engineering Research and Design</i> , 2016, 109, 586-592.	2.7	48
10	Gas Holdup, Axial Dispersion, and Mass Transfer Studies in Bubble Columns. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 14268-14278.	1.8	46
11	Development and implementation of supply chain optimization framework for CO ₂ capture and storage in the Netherlands. <i>Computers and Chemical Engineering</i> , 2017, 102, 40-51.	2.0	42
12	Ionic Liquid as a Selective Capture Method of CO ₂ from Different Sources: Comparison with MEA. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 4845-4853.	3.2	38
13	An outlook towards 2030: Optimization and design of a CCUS supply chain in Germany. <i>Computers and Chemical Engineering</i> , 2019, 125, 499-513.	2.0	38
14	Statistical analysis of data from accelerated ageing tests of PES UF membranes. <i>Journal of Membrane Science</i> , 2007, 300, 111-116.	4.1	37
15	Optimization of CCUS supply chains in the UK: A strategic role for emissions reduction. <i>Chemical Engineering Research and Design</i> , 2020, 155, 211-228.	2.7	35
16	An integrated methodology for the economic and environmental assessment of a biorefinery supply chain. <i>Chemical Engineering Research and Design</i> , 2020, 160, 199-215.	2.7	34
17	Superstructure optimization of an integrated algae biorefinery. <i>Computers and Chemical Engineering</i> , 2019, 130, 106530.	2.0	33
18	Development of a dynamic model for cleaning ultra filtration membranes fouled by surface water. <i>Journal of Membrane Science</i> , 2007, 289, 26-31.	4.1	29

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19	Sustainable utilization and storage of carbon dioxide: Analysis and design of an innovative supply chain. <i>Computers and Chemical Engineering</i> , 2019, 131, 106569.	2.0	28
20	Phenol extraction with Cyanex 923: Kinetics of the solvent impregnated resin application. <i>Reactive and Functional Polymers</i> , 2009, 69, 264-271.	2.0	26
21	Expanding the lifetime of Li-ion batteries through optimization of charging profiles. <i>Journal of Cleaner Production</i> , 2019, 225, 928-938.	4.6	26
22	Scenario Analysis of Carbon Capture, Utilization (Particularly Producing Methane and Methanol), and Storage (CCUS) Systems. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 6961-6976.	1.8	24
23	Modeling and optimization of a sequence of chemical cleaning cycles in dead-end ultrafiltration. <i>Journal of Membrane Science</i> , 2008, 308, 207-217.	4.1	20
24	Scheduling in the FMCG Industry: An Industrial Case Study. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 7800-7815.	1.8	20
25	Balancing costs, safety and CO ₂ emissions in the design of hydrogen supply chains. <i>Computers and Chemical Engineering</i> , 2019, 129, 106493.	2.0	20
26	Modeling and optimization of membrane lifetime in dead-end ultra filtration. <i>Journal of Membrane Science</i> , 2008, 322, 46-51.	4.1	19
27	Dynamic optimization of chemical cleaning in dead-end ultra filtration. <i>Journal of Membrane Science</i> , 2008, 307, 309-313.	4.1	19
28	Solvent Swing Adsorption for the Recovery of Polyphenols from Black Tea. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 434-442.	1.8	19
29	Influence of liquid back mixing on a kinetically controlled reactive distillation process. <i>Chemical Engineering Science</i> , 2012, 68, 184-191.	1.9	18
30	Product-driven process synthesis: Extraction of polyphenols from tea. <i>Journal of Food Engineering</i> , 2017, 196, 113-122.	2.7	18
31	Pilot-scale production process for high internal phase emulsions: Experimentation and modeling. <i>Chemical Engineering Science</i> , 2016, 148, 32-43.	1.9	17
32	Analysis and optimization of carbon supply chains integrated to a power to gas process in Italy. <i>Journal of Cleaner Production</i> , 2020, 269, 122172.	4.6	17
33	A generic superstructure modeling and optimization framework on the example of bi-criteria Power-to-Methanol process design. <i>Computers and Chemical Engineering</i> , 2021, 150, 107327.	2.0	17
34	Integration of carbon dioxide and hydrogen supply chains. <i>Computer Aided Chemical Engineering</i> , 2018, , 1413-1418.	0.3	16
35	Population balances combined with Computational Fluid Dynamics: A modeling approach for dispersive mixing in a high pressure homogenizer. <i>Chemical Engineering Science</i> , 2014, 117, 376-388.	1.9	15
36	Influence of Physical Properties and Process Conditions on Entrainment Behavior in a Static-Mixer Settler Setup. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 2958-2968.	1.8	14

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37	A decision support platform for a bio-based supply chain: Application to the region of Lower Saxony and Bremen (Germany).. Computers and Chemical Engineering, 2018, 115, 233-242.	2.0	14
38	Design of Renewable and System-Beneficial District Heating Systems Using a Dynamic Emission Factor for Grid-Sourced Electricity. Energies, 2020, 13, 619.	1.6	14
39	Pilot-scale experimental validation of unsaturated polyesters synthesis by reactive distillation. Chemical Engineering Journal, 2012, 213, 175-185.	6.6	13
40	Using product driven process synthesis in the biorefinery. Computers and Chemical Engineering, 2016, 91, 257-268.	2.0	13
41	Development of a multi-objective coagulation system for long-term fouling control in dead-end ultrafiltration. Journal of Membrane Science, 2008, 325, 823-830.	4.1	12
42	Modeling and optimization of green tea precipitation for the recovery of catechins. Separation and Purification Technology, 2014, 129, 129-136.	3.9	12
43	Power-to-Methanol at Refineries as a Precursor to Green Jet Fuel Production: a Simulation and Assessment Study. Computer Aided Chemical Engineering, 2020, , 1453-1458.	0.3	11
44	Evaluation of configuration alternatives for multi-product polyester synthesis by reactive distillation. Computers and Chemical Engineering, 2013, 52, 193-203.	2.0	9
45	A Process Synthesis Approach for Isolation of Isoflavones from Okara. Industrial & Engineering Chemistry Research, 2015, 54, 691-699.	1.8	9
46	Optimization of CCUS Supply Chains for Some European Countries under the Uncertainty. Processes, 2020, 8, 960.	1.3	9
47	Energy optimization in the process industries: Unit Commitment at systems level. Computer Aided Chemical Engineering, 2010, 28, 931-936.	0.3	8
48	Experimental density, viscosity, interfacial tension and water solubility of ethyl benzene-1±-methyl benzyl alcohol-water system. Journal of Chemical Thermodynamics, 2013, 63, 31-37.	1.0	8
49	Product-driven process synthesis for the extraction of oil bodies from soybeans. Journal of Food Engineering, 2016, 185, 26-34.	2.7	7
50	Supply chain optimization for electricity-based jet fuel: The case study Germany. Applied Energy, 2022, 307, 117683.	5.1	7
51	Design of an Optimal Biorefinery. Computer Aided Chemical Engineering, 2011, , 371-376.	0.3	6
52	A combined lossy capacitor population balance model (LCPBM) for calculating the influence of frequency on electric field enhanced coalescence in a static-mixer settler setup. Chemical Engineering Science, 2013, 104, 727-741.	1.9	6
53	Integrated Product and Process Design for the Optimization of Mayonnaise Creaminess. Computer Aided Chemical Engineering, 2015, , 1133-1138.	0.3	6
54	Biogas Reforming as a Precursor for Integrated Algae Biorefineries: Simulation and Techno-Economic Analysis. Processes, 2021, 9, 1348.	1.3	6

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55	Integrated optimization of a waste water treatment plant using statistical analysis. Journal of Hazardous Materials, 2010, 179, 480-487.	6.5	5
56	Design of a wheat straw supply chain network in Lower Saxony, Germany through optimization. Computer Aided Chemical Engineering, 2017, , 871-876.	0.3	5
57	Surface-Response Analysis for the Optimization of a Carbon Dioxide Absorption Process Using [hmim][Tf2N]. Processes, 2020, 8, 1063.	1.3	5
58	Reactive Distillation: An Attractive Alternative for the Synthesis of Unsaturated Polyester. Macromolecular Symposia, 2011, 302, 46-55.	0.4	4
59	Cyclic distillation - towards energy efficient binary distillation. Computer Aided Chemical Engineering, 2012, , 697-701.	0.3	4
60	Modelling of packed bed adsorption columns for the separation of green tea catechins. Separation Science and Technology, 2016, 51, 2339-2347.	1.3	4
61	Development of a conceptual process for CO ₂ capture from flue gases using ionic liquid. Computer Aided Chemical Engineering, 2017, 40, 2623-2628.	0.3	4
62	Steady state analysis of structured liquids in a penetrometer. Journal of Food Engineering, 2018, 218, 50-60.	2.7	4
63	Optimization of energy storage and system flexibility in the context of the energy transition: Germany's power grid as a case study. BMC Energy, 2019, 1, .	6.3	4
64	Dynamic Modeling and Control of a Simulated Carbon Capture Process for Sustainable Power-to-X. Applied Sciences (Switzerland), 2021, 11, 9574.	1.3	4
65	Extended rate-based model validation for polyester synthesis by reactive distillation. Computer Aided Chemical Engineering, 2012, 30, 1182-1186.	0.3	3
66	Integrating Planning and Scheduling in an Oil Refinery with a Rolling Horizon Approach. Computer Aided Chemical Engineering, 2014, 33, 439-444.	0.3	3
67	Multi-objective optimization of energy networks under demand uncertainty. Computer Aided Chemical Engineering, 2016, , 2319-2324.	0.3	3
68	An optimization model for a biorefinery system based on process design and logistics. Computer Aided Chemical Engineering, 2019, 46, 265-270.	0.3	3
69	Innovative application of statistical analysis for the optimization of CO ₂ absorption from flue gas with ionic liquid. Computer Aided Chemical Engineering, 2019, 46, 151-156.	0.3	3
70	Shaping the future energy markets with hybrid multimicrogrids by sequential least squares programming. ChemistrySelect, 2023, 8, 121-156.	0.7	3
71	OUTDOOR " An open-source superstructure construction and optimization tool. Computer Aided Chemical Engineering, 2021, , 413-418.	0.3	3
72	Design of hydrogen supply chains under demand uncertainty" a case study of passenger transport in Germany. ChemistrySelect, 2023, 8, 741-762.	0.7	3

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73	Renewable Fuels from Integrated Power- and Biomass-to-X Processes: A Superstructure Optimization Study. Processes, 2022, 10, 1298.	1.3	3
74	Simultaneous Optimization of Planning and Scheduling in an Oil Refinery. Computer Aided Chemical Engineering, 2011, 29, 925-929.	0.3	2
75	Integrated Operation and Design of a Simulated Moving Bed Reactor. Computer Aided Chemical Engineering, 2012, 30, 642-646.	0.3	2
76	Methodology for Assessment and Optimization of Industrial Eco-Systems. Challenges, 2012, 3, 49-69.	0.9	2
77	A Modeling Approach for Dispersive Mixing of Oil in Water Emulsions. Computer Aided Chemical Engineering, 2013, 32, 841-846.	0.3	2
78	Sustainable Design and Operation of a Reactive Distillation System Used for the Production of Cosmetic Ingredients. Computer Aided Chemical Engineering, 2015, 36, 85-107.	0.3	2
79	Fast Fourier Transforms for Microgrid Climate Computing. Computer Aided Chemical Engineering, 2019, , 1657-1662.	0.3	2
80	Taking green anti-fouling strategies in dead-end ultrafiltration to the next level. Chemical Engineering Research and Design, 2009, 87, 1589-1595.	2.7	1
81	Synthesis tool for separation processes in the pharmaceutical industry. Computer Aided Chemical Engineering, 2011, 29, 276-280.	0.3	1
82	Modeling the liquid back mixing characteristics for a kinetically controlled reactive distillation process. Computer Aided Chemical Engineering, 2011, 29, 11-15.	0.3	1
83	Process Design for Extraction of Soybean Oil Bodies by Applying the Product Driven Process Synthesis Methodology. Computer Aided Chemical Engineering, 2014, , 193-198.	0.3	1
84	Balancing Costs, Safety and CO2 Emissions in the Design of Hydrogen Supply Chains. Computer Aided Chemical Engineering, 2018, 43, 603-608.	0.3	1
85	Agile Operation of Renewable Methanol Synthesis under Fluctuating Power Inputs. Computer Aided Chemical Engineering, 2020, , 1381-1386.	0.3	1
86	2. Performance products in a challenging environment. , 2020, , 9-88.		1
87	Certainty through uncertainty: stochastic optimization of grid-integrated large-scale energy storage in Germany. ChemistrySelect, 2020, .	0.7	1
88	Multi-objective optimization of CCUS supply chains for European countries with higher carbon dioxide emissions. ChemistrySelect, 2023, 8, 1593-1620.	0.7	1
89	Process intensification and digital twin“ the potential for the energy transition in process industries. ChemistrySelect, 2023, 8, 4859-4877.	0.7	1
90	Ice Cream Scheduling. Computer Aided Chemical Engineering, 2011, 29, 915-919.	0.3	0

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91	Linking Scheduling to Control in an Oil Refinery. <i>Computer Aided Chemical Engineering</i> , 2012, , 887-891.	0.3	0
92	Sustainable design of a reactive distillation system. <i>Computer Aided Chemical Engineering</i> , 2012, 30, 61-65.	0.3	0
93	A Neural Network Application in the Design of Emulsion-Based Products. <i>Computer Aided Chemical Engineering</i> , 2012, , 692-696.	0.3	0
94	Integrated optimization of the adsorption of theaflavins from black tea on macroporous resins. <i>Computer Aided Chemical Engineering</i> , 2012, 31, 725-729.	0.3	0
95	Chemicals from biomass: integrating bioprocesses into chemical production complexes for sustainable development. <i>Green Processing and Synthesis</i> , 2013, 2, .	1.3	0
96	Enhanced configurations for polyesters synthesis by reactive distillation. <i>Computer Aided Chemical Engineering</i> , 2013, 32, 457-462.	0.3	0
97	Entrainment Reduction in a Static-Mixer Settler Setup by Electric Field Enhanced Coalescence. <i>Separation Science and Technology</i> , 2014, 49, 186-196.	1.3	0
98	Multi-objective optimization for the production of fructose in a simulated moving bed reactor. <i>Computer Aided Chemical Engineering</i> , 2015, , 347-352.	0.3	0
99	Using Product Driven Process Synthesis in the Biorefinery. <i>Computer Aided Chemical Engineering</i> , 2015, , 1253-1258.	0.3	0
100	Process Integration as an Effective Route Towards Sustainable Oil Refinery Development. <i>Computer Aided Chemical Engineering</i> , 2018, 43, 609-614.	0.3	0
101	Process design and techno-economic analysis of a pineapple wine production plant under the context of the Choco-Colombia region. <i>Computer Aided Chemical Engineering</i> , 2019, 46, 277-282.	0.3	0
102	Giving added value to products from biomass: the role of mathematical programming in the product-driven process synthesis framework. <i>Computer Aided Chemical Engineering</i> , 2019, 46, 1591-1596.	0.3	0
103	Analysis and Optimization of Carbon Supply Chains Integrated to a Power to Gas Plant in Italy. <i>Computer Aided Chemical Engineering</i> , 2020, , 325-330.	0.3	0
104	3. A structured approach for product-driven process design of consumer products. , 2020, , 89-118.		0
105	Dynamic modeling of fouling over multiple biofuel production cycles in a membrane reactor. <i>Chemical Product and Process Modeling</i> , 2020, .	0.5	0
106	Supply chain optimization framework for CO ₂ capture, utilization, and storage in Germany. <i>ChemistrySelect</i> , 2023, 8, 1685-1711.	0.7	0
107	Exergy analysis of an atmospheric residue desulphurization hydrotreating process for a crude oil refinery. <i>ChemistrySelect</i> , 2023, 8, 1621-1657.	0.7	0
108	Methods for Integrating and Handling Complex Optimization Problems in the Process Industries. <i>Recent Patents on Chemical Engineering</i> , 2009, 2, 123-127.	0.5	0

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109	Modeling Techniques For Integration Of Process Systems. , 2009, , .		0
110	Methods for Integrating and Handling Complex Optimization Problems in the Process Industries. Recent Patents on Chemical Engineering, 2010, 2, 123-127.	0.5	0
111	Probabilistic design approach to build the liveness in an integrated process scheme. Computer Aided Chemical Engineering, 2012, 31, 720-724.	0.3	0
112	A Supply Chain Optimization Framework For CO2 Emission Reduction: Case Of The Netherlands. , 2016, , .		0
113	Model-based Optimization of Battery Energy Storage Systems. Computer Aided Chemical Engineering, 2017, , 2563-2568.	0.3	0
114	Optimization of electrolysis and carbon capture processes for sustainable production of chemicals through Power-to-X. ChemistrySelect, 2022, .	0.7	0
115	Development of future-proof supply concepts for sector-coupled district heating systems based on scenario-analysis. ChemistrySelect, 2022, .	0.7	0
116	Integrating multi-objective superstructure optimization and multi-criteria assessment: a novel methodology for sustainable process design. ChemistrySelect, 2022, .	0.7	0
117	The role of bioprocess systems engineering in extracting chemicals and energy from microalgae. ChemistrySelect, 2022, .	0.7	0
118	Power to the city: Assessing the rooftop solar photovoltaic potential in multiple cities of Ecuador. ChemistrySelect, 2022, .	0.7	0