

Anton Friedl

List of Publications by Year in descending order

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121
papers

3,472
citations

159585

30
h-index

149698

56
g-index

132
all docs

132
docs citations

132
times ranked

4020
citing authors

#	ARTICLE	IF	CITATIONS
1	Prediction of heating values of biomass fuel from elemental composition. <i>Analytica Chimica Acta</i> , 2005, 544, 191-198.	5.4	634
2	Application of continuous substrate feeding to the ABE fermentation: relief of product inhibition using extraction, perstraction, stripping, and pervaporation. <i>Biotechnology Progress</i> , 1992, 8, 382-390.	2.6	163
3	Lignin from Micro- to Nanosize: Production Methods. <i>International Journal of Molecular Sciences</i> , 2017, 18, 1244.	4.1	145
4	Analysis of methane potentials of steam-exploded wheat straw and estimation of energy yields of combined ethanol and methane production. <i>Journal of Biotechnology</i> , 2009, 142, 50-55.	3.8	141
5	Lignin from Micro- to Nanosize: Applications. <i>International Journal of Molecular Sciences</i> , 2017, 18, 2367.	4.1	136
6	Continuous acetone-butanol-ethanol (ABE) fermentation using immobilized cells of <i>Clostridium acetobutylicum</i> in a packed bed reactor and integration with product removal by pervaporation. <i>Biotechnology and Bioengineering</i> , 1991, 38, 518-527.	3.3	124
7	Analysis of methane yields from energy crops and agricultural by-products and estimation of energy potential from sustainable crop rotation systems in EU-27. <i>Clean Technologies and Environmental Policy</i> , 2010, 12, 153-161.	4.1	95
8	Long-Term Continuous Cultivation of <i>Clostridium beijerinckii</i> in a Two-Stage Chemostat with On-Line Solvent Removal. <i>Applied and Environmental Microbiology</i> , 1996, 62, 3210-3219.	3.1	90
9	Evaluation of alkali resistant nanofiltration membranes for the separation of hemicellulose from concentrated alkaline process liquors. <i>Desalination</i> , 2006, 192, 303-314.	8.2	78
10	Modeling and simulation of high pressure water scrubbing technology applied for biogas upgrading. <i>Clean Technologies and Environmental Policy</i> , 2015, 17, 373-391.	4.1	72
11	Modelling selective H ₂ S absorption and desorption in an aqueous MDEA-solution using a rate-based non-equilibrium approach. <i>Chemical Engineering and Processing: Process Intensification</i> , 2004, 43, 701-715.	3.6	67
12	Renewable hydrogen production: a technical evaluation based on process simulation. <i>Journal of Cleaner Production</i> , 2010, 18, S51-S62.	9.3	67
13	Non-thermal production of pure hydrogen from biomass: HYVOLUTION. <i>Journal of Cleaner Production</i> , 2010, 18, S4-S8.	9.3	65
14	Environmental Impact Assessment of High Pressure Water Scrubbing Biogas Upgrading Technology. <i>Clean - Soil, Air, Water</i> , 2013, 41, 917-927.	1.1	59
15	Determination of glucose and ethanol in bioethanol production by near infrared spectroscopy and chemometrics. <i>Analytica Chimica Acta</i> , 2009, 642, 171-178.	5.4	56
16	Removal of NH ₃ from Biomass Gasification Producer Gas by Water Condensing in an Organic Solvent Scrubber. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 1576-1584.	3.7	55
17	Analysis and decrease of the energy demand of bioethanol-production by process integration. <i>Applied Thermal Engineering</i> , 2007, 27, 2657-2664.	6.0	54
18	Pinch and exergy analysis of lignocellulosic ethanol, biomethane, heat and power production from straw. <i>Applied Thermal Engineering</i> , 2012, 43, 20-28.	6.0	52

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19	Influence of physiologically relevant parameters on biomass formation in a trickle-bed bioreactor used for waste gas cleaning. Applied Microbiology and Biotechnology, 1996, 45, 286-292.	3.6	50
20	Hydrogen for a sustainable global economy. Journal of Cleaner Production, 2010, 18, S1-S3.	9.3	47
21	Downstream process options for the ABE fermentation. FEMS Microbiology Letters, 2016, 363, fnw073.	1.8	47
22	Investigation of pervaporation performance of POMS membrane during separation of butanol from water and the effect of added acetone and ethanol. Separation and Purification Technology, 2016, 170, 40-48.	7.9	46
23	Comparison of combined ethanol and biogas polygeneration facilities using exergy analysis. Applied Thermal Engineering, 2012, 37, 19-29.	6.0	40
24	Life cycle assessment of a lignin nanoparticle biorefinery: Decision support for its process development. Journal of Cleaner Production, 2020, 245, 118760.	9.3	39
25	Simulation of protein ultrafiltration using CFD: Comparison of concentration polarisation and fouling effects with filtration and protein adsorption experiments. Journal of Membrane Science, 2009, 337, 1-8.	8.2	38
26	Combined liquid hot water and ethanol organosolv treatment of wheat straw for extraction and reaction modeling. Journal of Cleaner Production, 2017, 165, 1473-1484.	9.3	35
27	Ecology of scale versus economy of scale for bioethanol production. Biofuels, Bioproducts and Biorefining, 2007, 1, 264-269.	3.7	33
28	Lignin concentration and fractionation from ethanol organosolv liquors by ultra- and nanofiltration. Journal of Cleaner Production, 2016, 136, 62-71.	9.3	32
29	Energy saving potential of hybrid membrane and distillation process in butanol purification: Experiments, modelling and simulation. Chemical Engineering and Processing: Process Intensification, 2016, 104, 201-211.	3.6	32
30	Production of Micro- and Nanoscale Lignin from Wheat Straw Using Different Precipitation Setups. Molecules, 2018, 23, 633.	3.8	32
31	Preventing the chlorine-induced high temperature corrosion in power boilers without loss of electrical efficiency in steam cycles. Applied Thermal Engineering, 2006, 26, 2005-2011.	6.0	30
32	Heat integration of biochemical ethanol production from straw – A case study. Applied Energy, 2013, 102, 32-43.	10.1	30
33	Direct Precipitation of Lignin Nanoparticles from Wheat Straw Organosolv Liquors Using a Static Mixer. Molecules, 2020, 25, 1388.	3.8	30
34	Scaling prediction based on thermodynamic equilibrium calculation – scopes and limitations. Desalination, 2009, 244, 31-47.	8.2	29
35	Process simulation and CFD calculations for the development of an innovative baled biomass-fired combustion chamber. Applied Thermal Engineering, 2007, 27, 1138-1143.	6.0	27
36	Butanol production from concentrated lactose/whey permeate: Use of pervaporation membrane to recover and concentrate product. Applied Microbiology and Biotechnology, 2014, 98, 9859-9867.	3.6	27

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37	Global View of Biofuel Butanol and Economics of Its Production by Fermentation from Sweet Sorghum Bagasse, Food Waste, and Yellow Top Presscake: Application of Novel Technologies. <i>Fermentation</i> , 2020, 6, 58.	3.0	27
38	Application of exergy balances for evaluation of process configurations for biological hydrogen production. <i>Applied Thermal Engineering</i> , 2010, 30, 70-76.	6.0	25
39	Modeling a dry-scrubbing flue gas cleaning process. <i>Chemical Engineering and Processing: Process Intensification</i> , 2000, 39, 425-432.	3.6	24
40	Perspectives for the production of bioethanol from wood and straw in Austria: technical, economic, and ecological aspects. <i>Clean Technologies and Environmental Policy</i> , 2012, 14, 411-425.	4.1	24
41	Applicability of near-infrared spectroscopy for process monitoring in bioethanol production. <i>Biochemical Engineering Journal</i> , 2010, 52, 187-193.	3.6	23
42	Computational fluid dynamic simulation of a solid biomass combustor: modelling approaches. <i>Clean Technologies and Environmental Policy</i> , 2008, 10, 165-174.	4.1	22
43	POMS Membrane for Selective Separation of Ethanol from Dilute Alcohol-Aqueous Solutions by Pervaporation. <i>Separation Science and Technology</i> , 2012, 47, 1709-1714.	2.5	22
44	A Review on the Feedstocks for the Sustainable Production of Bioactive Compounds in Biorefineries. <i>Sustainability</i> , 2019, 11, 6765.	3.2	22
45	Integration studies on a two-stage fermentation process for the production of biohydrogen. <i>Journal of Cleaner Production</i> , 2010, 18, S72-S80.	9.3	20
46	Towards a wheat straw biorefinery: Combination of Organosolv and Liquid Hot Water for the improved production of sugars from hemicellulose and lignin hydrolysis. <i>Bioresource Technology Reports</i> , 2021, 14, 100667.	2.7	20
47	Effects of feedstocks on the process integration of biohydrogen production. <i>Clean Technologies and Environmental Policy</i> , 2011, 13, 547-558.	4.1	19
48	Effect of process integration on the exergy balance of a two-stage process for fermentative hydrogen production. <i>Journal of Cleaner Production</i> , 2010, 18, S63-S71.	9.3	17
49	Potential of different <i>Sorghum bicolor</i> (L. moench) varieties for combined ethanol and biogas production in the Pannonian climate of Austria. <i>Energy</i> , 2013, 55, 107-113.	8.8	17
50	ANALYSIS AND MODELLING OF THE SOLUBILITY OF BIOGAS COMPONENTS IN WATER FOR PHYSICAL ABSORPTION PROCESSES. <i>Environmental Engineering and Management Journal</i> , 2013, 12, 147-162.	0.6	17
51	Removal of wood extractives as pulp (pre-)treatment: a technological review. <i>SN Applied Sciences</i> , 2021, 3, 1.	2.9	17
52	Process investigations of extreme thermophilic fermentations for hydrogen production: Effect of bubble induction and reduced pressure. <i>Bioresource Technology</i> , 2012, 118, 170-176.	9.6	16
53	Simulation of the downstream processing in the ethanol production from lignocellulosic biomass with ASPEN Plus® and IPSEpro. <i>Energy, Sustainability and Society</i> , 2014, 4, .	3.8	16
54	CFD-simulation of mass transfer effects in gas and vapour permeation modules. <i>Desalination</i> , 2002, 146, 237-241.	8.2	15

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55	Investigation of organosolv and hot-compressed water pretreatments of rice straw. <i>Biomass Conversion and Biorefinery</i> , 2016, 6, 355-364.	4.6	15
56	Production and Properties of Lignin Nanoparticles from Ethanol Organosolv Liquorsâ€™ Influence of Origin and Pretreatment Conditions. <i>Polymers</i> , 2021, 13, 384.	4.5	15
57	Economic and Global Warming Potential Assessment of Flexible Power Generation with Biogas Plants. <i>Sustainability</i> , 2019, 11, 2530.	3.2	14
58	From the culture broth to the erythritol crystals: an opportunity for circular economy. <i>Applied Microbiology and Biotechnology</i> , 2021, 105, 4467-4486.	3.6	14
59	Increasing power plant efficiency by fuel drying. <i>Computers and Chemical Engineering</i> , 1999, 23, S919-S922.	3.8	13
60	LIGNOCELLULOSIC BIOREFINERY. <i>Environmental Engineering and Management Journal</i> , 2012, 11, 75-79.	0.6	13
61	Degradation of toluene/heptene mixtures in a trickling-bed bioreactor. <i>Applied Microbiology and Biotechnology</i> , 1995, 44, 230-233.	3.6	11
62	Utilization of Food and Agricultural Residues for a Flexible Biogas Production: Process Stability and Effects on Needed Biogas Storage Capacities. <i>Energies</i> , 2019, 12, 2678.	3.1	11
63	Pressurized Liquid Extraction of Cannabinoids from Hemp Processing Residues: Evaluation of the Influencing Variables. <i>Processes</i> , 2020, 8, 1334.	2.8	11
64	Integral Analysis of Liquid-Hot-Water Pretreatment of Wheat Straw: Evaluation of the Production of Sugars, Degradation Products, and Lignin. <i>Sustainability</i> , 2022, 14, 362.	3.2	10
65	Influence of different LCIA methods on an exemplary scenario analysis from a process development LCA case study. <i>Environment, Development and Sustainability</i> , 2023, 25, 6269-6293.	5.0	10
66	Influence of hemicellulose aggregate and gel layer formation on flux and retention during nanofiltration of alkaline solutions. <i>Desalination</i> , 2005, 175, 121-134.	8.2	9
67	Estimation of energy demand of fermentation-based hydrogen production. <i>Journal of Cleaner Production</i> , 2010, 18, S81-S87.	9.3	9
68	Integrated Sono-Fenton ultrafiltration process for 4-chlorophenol removal from aqueous effluents: assessment of operational parameters (Part 1). <i>Clean Technologies and Environmental Policy</i> , 2014, 16, 1145-1160.	4.1	9
69	Confined evaporation-induced self-assembly of colloidal lignin particles for anisotropic adhesion. <i>Colloids and Interface Science Communications</i> , 2020, 38, 100306.	4.1	9
70	Acid gas absorption in trickle flow columnsâ€™ Modelling of the residence time distribution of a pilot plant. <i>Chemical Engineering and Processing: Process Intensification</i> , 2007, 46, 262-270.	3.6	8
71	Modeling and simulation of coupled ethanol and biogas production. <i>Clean Technologies and Environmental Policy</i> , 2010, 12, 163-170.	4.1	8
72	Techno-economic assessment of providing control energy reserves with a biogas plant. <i>Frontiers of Chemical Science and Engineering</i> , 2018, 12, 763-771.	4.4	8

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73	A knowledge based system to support the process selection during waste water treatment. Resources, Conservation and Recycling, 2003, 37, 205-215.	10.8	7
74	UV-Vis Spectroscopy and Chemometrics for the Monitoring of Organosolv Pretreatments. ChemEngineering, 2018, 2, 45.	2.4	7
75	Simulation of a Highly Efficient Dual Fluidized Bed Gasification Process. Chemie-Ingenieur-Technik, 2001, 73, 642-643.	0.8	6
76	Exergy analysis of biological hydrogen production. Computer Aided Chemical Engineering, 2008, 25, 1137-1142.	0.5	6
77	Assessment of biorefinery process intensification by ultrasound technology. Clean Technologies and Environmental Policy, 2014, 16, 1403-1410.	4.1	6
78	The purification of fermentatively produced hydrogen using membrane technology: a simulation based on small-scale pilot plant results. Clean Technologies and Environmental Policy, 2016, 18, 315-322.	4.1	6
79	Enhancement of an object-oriented power plant simulator by seawater desalination topics. Desalination, 2003, 156, 355-360.	8.2	5
80	Exploitation of Wheat Straw Biorefinery Side Streams as Sustainable Substrates for Microorganisms: A Feasibility Study. Processes, 2019, 7, 956.	2.8	5
81	Recovery of Salts from Synthetic Erythritol Culture Broth via Electrodialysis: An Alternative Strategy from the Bin to the Loop. Sustainability, 2022, 14, 734.	3.2	5
82	Influence of Temperature and Lignin Concentration on Formation of Colloidal Lignin Particles in Solvent-Shifting Precipitation. Sustainability, 2022, 14, 1219.	3.2	5
83	Sequential Pretreatment of Wheat Straw: Liquid Hot Water Followed by Organosolv for the Production of Hemicellulosic Sugars, Lignin, and a Cellulose-Enriched Pulp. Waste and Biomass Valorization, 2022, 13, 4771-4784.	3.4	5
84	Online Raman monitoring of the phase transition of magnesium sulphite hydrate. Chemical Engineering and Processing: Process Intensification, 2005, 44, 471-475.	3.6	4
85	Modelling and Optimization of CO ₂ Absorption in Pneumatic Contactors Using Artificial Neural Networks Developed with Clonal Selection-Based Algorithm. International Journal of Nonlinear Sciences and Numerical Simulation, 2015, 16, 97-110.	1.0	4
86	Economic and Technical Evaluation of Flexible Power Generation Scenarios for a Biogas Plant. Journal of Sustainable Development of Energy, Water and Environment Systems, 2020, 8, 328-343.	1.9	4
87	Measuring the Effective Mass Transfer Area of a Structured Packing by a Chemical Method. Revista De Chimie (discontinued), 2008, 59, .	0.4	4
88	Modelling of the Lenzing SO ₂ recovery process and validation with plant data. Journal of Cleaner Production, 2008, 16, 208-214.	9.3	3
89	Prozesssimulation der Produktion von Ethanol und Methan aus lignocellulosehaltigen Rohstoffen. Chemie-Ingenieur-Technik, 2011, 83, 1609-1617.	0.8	3
90	Integrated Sono-Fenton ultrafiltration process for 4-chlorophenol removal from aqueous effluents: process modeling and simulation Part 2. Clean Technologies and Environmental Policy, 2014, 16, 1161-1177.	4.1	3

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91	CFD-Simulation of Preparative Chromatographic Columns: Effect of the Distributor and the Column Design on the Separation Performance. <i>Chemie-Ingenieur-Technik</i> , 2001, 73, 639-639.	0.8	2
92	Enhanced cellulose degradation of wheat straw during aqueous ethanol organosolv treatment. <i>BioResources</i> , 2017, 12, 9407-9419.	1.0	2
93	Study of the ammonium sulfate aqueous solution electro dialysis. <i>Chemical Industry and Chemical Engineering Quarterly</i> , 2005, 11, 173-176.	0.7	2
94	Abbau von Toluol in einer zweistufigen TropfkÄrperbioreaktor-(TBR-) Anlage. <i>Chemie-Ingenieur-Technik</i> , 1997, 69, 697-701.	0.8	1
95	Simulation and optimization of the reactive absorption of HF/HNO ₃ during pickling acid regeneration. <i>Computer Aided Chemical Engineering</i> , 2000, 8, 919-924.	0.5	1
96	An Integrated Process Model of Adsorption and Biofiltration For Waste Gas Cleaning. <i>Chemie-Ingenieur-Technik</i> , 2001, 73, 601-601.	0.8	1
97	The Equilibrium Network: A New Approach for Simulation and Visualization of Aqueous Electrolyte Systems. <i>Chemical Product and Process Modeling</i> , 2007, 2, .	0.9	1
98	Integration of the bio-ethanol process in a network of facilities for heat and power production from renewable sources using process simulation. <i>Computer Aided Chemical Engineering</i> , 2007, , 1295-1300.	0.5	1
99	Conference report 7th International Conference on Environmental Engineering and Management ICEEM07. <i>Journal of Cleaner Production</i> , 2014, 67, 291-292.	9.3	1
100	CFD modelling of organosolv lignin extraction in packed beds. <i>Computer Aided Chemical Engineering</i> , 2018, 43, 1583-1588.	0.5	1
101	Bioethanol from Sugar and Starch. , 2019, , 905-924.		1
102	Process Safety for Sustainable Applications. <i>International Journal of Reliability, Quality and Safety Engineering</i> , 2021, 28, 2150033.	0.6	1
103	EFFECTIVE MASS TRANSFER AREA DETERMINING OF A MELLAPAK 750 Y STRUCTURED PACKING. <i>Environmental Engineering and Management Journal</i> , 2008, 7, 249-254.	0.6	1
104	Bioethanol from Sugar and Starch. , 2017, , 1-21.		1
105	Implementation of flue gas cleaning systems into an object-oriented process simulator for practical use. <i>Computer Aided Chemical Engineering</i> , 2000, 8, 847-852.	0.5	0
106	Optimization of an acidic chlorine scrubber with a rate-based simulation engine. <i>Computer Aided Chemical Engineering</i> , 2001, , 535-540.	0.5	0
107	Process Integration Supported by a Knowledge Based System in Waste Water Treatment. <i>Chemie-Ingenieur-Technik</i> , 2001, 73, 626-626.	0.8	0
108	Efficiency Optimisation of Thermal Power Plants Using Integrated Process Simulation. <i>Chemie-Ingenieur-Technik</i> , 2001, 73, 626-627.	0.8	0

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109	Electrodialysis of Salt Solutions: Effect of Salt on the Electrical Resistance of ED Membranes. Chemie-Ingenieur-Technik, 2001, 73, 758-758.	0.8	0
110	Sewage Sludge to Energy - A Simulation Study. Chemical Product and Process Modeling, 2012, 7, .	0.9	0
111	Collocation Method for the Modeling of Membrane Gas Permeation Systems. International Journal of Nonlinear Sciences and Numerical Simulation, 2014, 15, .	1.0	0
112	Collocation Method for the Modeling of Membrane Gas Permeation Systems. International Journal of Nonlinear Sciences and Numerical Simulation, 2015, 16, 141-149.	1.0	0
113	DEVELOPMENT OF AN INTERACTIVE TRAINING TOOL FOR DISSEMINATION OF BEST PRACTICE IN WASTE REPORTING AND MANAGEMENT. Environmental Engineering and Management Journal, 2004, 3, 539-547.	0.6	0
114	ENVIRONMENTAL ENGINEERING SUPPORTED BY PROCESS SIMULATION. Environmental Engineering and Management Journal, 2004, 3, 457-464.	0.6	0
115	DEVELOPMENT OF A GAS PERMEATION MODEL FOR BIOGAS UPGRADING. Environmental Engineering and Management Journal, 2005, 4, 393-404.	0.6	0
116	STUDY OF THE DRY FLUE GAS DESULPHURIZATION BY CALCINED LIMESTONE. Environmental Engineering and Management Journal, 2006, 5, 433-443.	0.6	0
117	EDITORIAL - A SPECIAL ISSUE ON PROGRESS IN ENVIRONMENTAL ENGINEERING, BIOTECHNOLOGY AND MANAGEMENT IN THE FRAME OF KNOWLEDGE-BASED SUSTAINABLE ECONOMY Exploratory Workshop, 19-21 September 2012. Environmental Engineering and Management Journal, 2013, 12, 1529-1532.	0.6	0
118	COMPARISON OF COMBINED ETHANOL AND BIOGAS POLYGENERATION FACILITIES USING EXERGY ANALYSIS. Environmental Engineering and Management Journal, 2013, 12, 1575-1582.	0.6	0
119	OPTIMIZING THE NANOFILTRATION OPERATING CONDITIONS AS POST TREATMENT STEP IN THE GROUNDWATER DENITRIFICATION PROCESS. Environmental Engineering and Management Journal, 2014, 13, 2417-2424.	0.6	0
120	Fermentative Alkoholerzeugung und -nutzung. , 2016, , 1501-1607.		0
121	APPLICATION OF PERVAPORATION FOR THE IN-SITU RECOVERY OF GREEN SOLVENTS AND BIOFUELS FROM ABE FERMENTATION. Environmental Engineering and Management Journal, 2019, 18, 1711-1719.	0.6	0