Bhavik Bakshi

List of Publications by Year
in descending order

185 papers	7,176 citations	71102 41 h-index	64796 79 g-index
194 all docs	194 docs citations	194 times ranked	5148 citing authors

#	Article	IF	Citations
1	Multi-scale sustainable engineering: Integrated design of reaction networks, life cycles, and economic sectors. Computers and Chemical Engineering, 2022, 156, 107578.	3.8	6
2	Designing Climate Action and Regulations for sustainaBility (DCARB): Framework and campus application. Journal of Cleaner Production, 2022, 356, 131690.	9.3	3
3	Metrics for a nature-positive world: A multiscale approach for absolute environmental sustainability assessment. Science of the Total Environment, 2022, 846, 157373.	8.0	10
4	Meeting the challenge of water sustainability: The role of process systems engineering. AICHE Journal, 2021, 67, e17113.	3.6	4
5	A perspective on the role of uncertainty in sustainability science and engineering. Resources, Conservation and Recycling, 2021, 164, 105140.	10.8	18
6	Techno-ecologically synergistic foodâ€"energyâ€"water systems can meet human and ecosystem needs. Energy and Environmental Science, 2021, 14, 3700-3716.	30.8	11
7	ACS Sustainable Chemistry & Engineering Invites Contributions to a Virtual Special Issue on The Circular Economy of Plastics. ACS Sustainable Chemistry and Engineering, 2021, 9, 1425-1426.	6.7	5
8	Process Systems Engineering Perspective on the Design of Materials and Molecules. Industrial & Engineering Chemistry Research, 2021, 60, 5194-5206.	3.7	22
9	Toward sustainable circular economies: A computational framework for assessment and design. Journal of Cleaner Production, 2021, 295, 126353.	9.3	30
10	Designing industrial landscapes for mitigating air pollution with <scp>spatiallyâ€explicit technoâ€ecological</scp> synergy. AICHE Journal, 2021, 67, e17347.	3.6	5
11	Life cycle energy and greenhouse gas emissions implications of using carbon fiber reinforced polymers in automotive components: Front subframe case study. Sustainable Materials and Technologies, 2021, 28, e00263.	3.3	12
12	Effects of spatial heterogeneity of leaf density and crown spacing of canopy patches on dry deposition rates. Agricultural and Forest Meteorology, 2021, 306, 108440.	4.8	4
13	Toward Sustainable Metalâ€"Organic Frameworks for Post-Combustion Carbon Capture by Life Cycle Assessment and Molecular Simulation. ACS Sustainable Chemistry and Engineering, 2021, 9, 12132-12141.	6.7	10
14	Constructed Wetlands as Unit Operations in Chemical Process Design: Benefits and Simulation. Computers and Chemical Engineering, 2021, 153, 107454.	3.8	6
15	Designing Value Chains of Plastic and Paper Carrier Bags for a Sustainable and Circular Economy. ACS Sustainable Chemistry and Engineering, 2021, 9, 16687-16698.	6.7	8
16	Toward Nature-Positive Manufacturing by Adapting Industrial Processes to Pollution Uptake by Vegetation. ACS Sustainable Chemistry and Engineering, 2021, 9, 16709-16718.	6.7	4
17	Connecting air quality regulating ecosystem services with beneficiaries through quantitative serviceshed analysis. Ecosystem Services, 2020, 41, 101057.	5.4	20
18	Computationally Intensive Nonlinear Regression Methods. , 2020, , 505-517.		0

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19	Carbon Footprint of Biomimetic Carbon Fixation by Immobilizing Natureâ€™s CO₂-sequestering Enzyme and Regenerating Its Energy Carrier. ACS Sustainable Chemistry and Engineering, 2020, 8, 16833-16841.	6.7	6
20	Quantification and valuation of ecosystem services in life cycle assessment: Application of the cascade framework to rice farming systems. Science of the Total Environment, 2020, 747, 141278.	8.0	24
21	Designing hybrid life cycle assessment models based on uncertainty and complexity. International Journal of Life Cycle Assessment, 2020, 25, 2290-2308.	4.7	5
22	Direct and indirect vulnerability of economic sectors to water scarcity: A hotspot analysis of the Indian economy. Journal of Industrial Ecology, 2020, 24, 1323-1337.	5.5	2
23	Sustainable product design: A life-cycle approach. Chemical Engineering Science, 2020, 217, 115508.	3.8	27
24	Sustainability Assessment in a Geographical Region and of the Activities Performed. , 2020, , 536-561.		0
25	Nature-Based Solutions Can Compete with Technology for Mitigating Air Emissions Across the United States. Environmental Science & Technology, 2019, 53, 13228-13237.	10.0	24
26	Including Ecosystem Services in Life Cycle Assessment: Methodology and Application to Urban Farms. Procedia CIRP, 2019, 80, 287-291.	1.9	9
27	Towards integrating the ecosystem services cascade framework within the Life Cycle Assessment (LCA) cause-effect methodology. Science of the Total Environment, 2019, 690, 1284-1298.	8.0	70
28	Toward multiscale consequential sustainable process design: Including the effects of economy and resource constraints with application to green urea production in a watershed. Chemical Engineering Science, 2019, 207, 725-743.	3.8	11
29	Designing biofuel supply chains while mitigating harmful algal blooms with treatment wetlands. Computers and Chemical Engineering, 2019, 126, 113-127.	3.8	23
30	Toward Sustainable Chemical Engineering: The Role of Process Systems Engineering. Annual Review of Chemical and Biomolecular Engineering, 2019, 10, 265-288.	6.8	37
31	Accounting for nature's intermittency and growth while mitigating NO 2 emissions by technoecological synergistic designâ€”Application to a chloralkali process. Journal of Advanced Manufacturing and Processing, 2019, 1, .	2.4	7
32	Resource Utilization and Destruction in Indian Industrial Sectors: An Exergy Analysis. Industrial & Engineering Chemistry Research, 2019, 58, 11566-11575.	3.7	5
33	Engineering, markets, and human behavior: an essential integration for decisions toward sustainability. Current Opinion in Chemical Engineering, 2019, 26, 164-169.	7.8	2
34	Role of Vegetation in Mitigating Air Emissions Across Industrial Sites in the US. ACS Sustainable Chemistry and Engineering, 2019, 7, 3783-3791.	6.7	9
35	Ecosystem Services in Life Cycle Assessment while Encouraging Technoâ€Ecological Synergies. Journal of Industrial Ecology, 2019, 23, 347-360.	5.5	35
36	Integrating Market Models and Price Effects in a Multiscale Sustainable Process Design Framework. Computer Aided Chemical Engineering, 2019, , 175-180.	0.5	1

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37	Claiming Sustainability: Requirements and Challenges. ACS Sustainable Chemistry and Engineering, 2018, 6, 3632-3639.	6.7	36
38	Synergies between industry and nature â€“ An emergy evaluation of a biodiesel production system integrated with ecological systems. Ecosystem Services, 2018, 30, 257-266.	5.4	20
39	The carbon-nitrogen nexus of transportation fuels. Journal of Cleaner Production, 2018, 180, 790-803.	9.3	12
40	Ecosystems as unit operations for local technoâ€ecological synergy: Integrated process design with treatment wetlands. AIChE Journal, 2018, 64, 2390-2407.	3.6	21
41	Air quality and human health impacts of grasslands and shrublands in the United States. Atmospheric Environment, 2018, 182, 193-199.	4.1	22
42	Including nature in the food-energy-water nexus can improve sustainability across multiple ecosystem services. Resources, Conservation and Recycling, 2018, 137, 214-228.	10.8	48
43	Including Nature in Engineering for Innovation and Sustainability: Promise, Progress and Peril. Computer Aided Chemical Engineering, 2018, , 53-62.	0.5	0
44	Including Ecosystem Services in Sustainable Process Design across Multiple Spatial Scales. Computer Aided Chemical Engineering, 2018, 44, 1837-1842.	0.5	5
45	Extracting Heuristics for Designing Sustainable Built Environments by Coupling Multiobjective Evolutionary Optimization and Machine Learning. Computer Aided Chemical Engineering, 2018, , 2539-2544.	0.5	6
46	Ecosystem services in life cycle assessment - Part 2: Adaptations to regional and serviceshed information. Journal of Cleaner Production, 2018, 197, 772-780.	9.3	22
47	Ecosystem services in life cycle assessment - Part 1: A computational framework. Journal of Cleaner Production, 2018, 197, 314-322.	9.3	31
48	Bury, burn, or gasify: assessing municipal solid waste management options in Indian megacities by exergy analysis. Clean Technologies and Environmental Policy, 2017, 19, 1403-1412.	4.1	18
49	An urban systems framework to assess the trans-boundary food-energy-water nexus: implementation in Delhi, India. Environmental Research Letters, 2017, 12, 025008.	5.2	121
50	Synergies and trade-offs in renewable energy landscapes: Balancing energy production with economics and ecosystem services. Applied Energy, 2017, 199, 25-44.	10.1	29
51	The evolving metabolism of a developing economy: Indiaâ€™s exergy flows over four decades. Applied Energy, 2017, 206, 851-857.	10.1	4
52	Biosolids management with net-zero CO2 emissions: a techno-ecological synergy design. Clean Technologies and Environmental Policy, 2017, 19, 2099-2111.	4.1	9
53	Process to Planet Approach to Sustainable Process Design: Multiple Objectives and Byproducts. Theoretical Foundations of Chemical Engineering, 2017, 51, 936-948.	0.7	13
54	Including Nature in Engineering Decisions for Sustainability. , 2017, , 107-116.		1

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55	Assessing the capacity of local ecosystems to meet industrial demand for ecosystem services. AIChE Journal, 2016, 62, 3319-3333.	3.6	34
56	A sequential inputâ€“output framework to analyze the economic and environmental implications of energy policies: Gas taxes and fuel subsidies. Applied Energy, 2016, 184, 830-839.	10.1	49
57	Ethanol from Indian agro-industrial lignocellulosic biomass: an emergy evaluation. Clean Technologies and Environmental Policy, 2016, 18, 2625-2634.	4.1	15
58	A Water-Withdrawal Inputâ€“Output Model of the Indian Economy. Environmental Science & Technology, 2016, 50, 1313-1321.	10.0	26
59	Sustainability Assessment in a Geographical Region and of the Activities Performed. Impact of Meat Consumption on Health and Environmental Sustainability, 2016, , 18-43.	0.4	0
60	Process to planet: A multiscale modeling framework toward sustainable engineering. AIChE Journal, 2015, 61, 3332-3352.	3.6	40
61	Sustainable process design by the process to planet framework. AIChE Journal, 2015, 61, 3320-3331.	3.6	28
62	An Integrated Multiscale Modeling Framework for Sustainable Process Design Applications. Computer Aided Chemical Engineering, 2015, , 585-604.	0.5	1
63	Techno-Ecological Synergy: A Framework for Sustainable Engineering. Environmental Science & Technology, 2015, 49, 1752-1760.	10.0	110
64	Footprints of carbon and nitrogen: Revisiting the paradigm and exploring their nexus for decision making. Ecological Indicators, 2015, 53, 49-60.	6.3	13
65	N footprint and the nexus between C and N footprints. , 2015, , 195-220.		0
66	Allocation Games: Addressing the Ill-Posed Nature of Allocation in Life-Cycle Inventories. Environmental Science & Technology, 2015, 49, 7996-8003.	10.0	23
67	Life cycle and emergy based design of energy systems in developing countries: Centralized and localized options. Ecological Modelling, 2015, 305, 40-53.	2.5	40
68	Economic Dependence of U.S. Industrial Sectors on Animal-Mediated Pollination Service. Environmental Science & Technology, 2015, 49, 14441-14451.	10.0	38
69	Monetized value of the environmental, health and resource externalities of soy biodiesel. Energy Economics, 2015, 47, 18-24.	12.1	5
70	Accounting for Emissions and Sinks from the Biogeochemical Cycle of Carbon in the U.S. Economic Inputâ€Output Model. Journal of Industrial Ecology, 2014, 18, 818-828.	5.5	17
71	Reusable vs. disposable cups revisited: guidance in life cycle comparisons addressing scenario, model, and parameter uncertainties for the US consumer. International Journal of Life Cycle Assessment, 2014, 19, 931-940.	4.7	42
72	Integrating life-cycle assessment and choice analysis for alternative fuel valuation. Ecological Economics, 2014, 102, 83-93.	5.7	8

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73	Empirical Comparison of Inputâ€Output Methods for Life Cycle Assessment. Journal of Industrial Ecology, 2014, 18, 734-746.	5.5	8
74	Methods and tools for sustainable process design. Current Opinion in Chemical Engineering, 2014, 6, 69-74.	7.8	33
75	Allocation in life cycle inventory: partial set of solutions to an ill-posed problem. International Journal of Life Cycle Assessment, 2014, 19, 1854-1865.	4.7	6
76	Revisiting least squares techniques for the purposes of allocation in life cycle inventory. International Journal of Life Cycle Assessment, 2014, 19, 1733-1744.	4.7	4
77	Life Cycle Comparison of Coal Gasification by Conventional versus Calcium Looping Processes. Industrial & Engineering Chemistry Research, 2014, 53, 18910-18919.	3.7	6
78	Accounting for the Biogeochemical Cycle of Nitrogen in Input-Output Life Cycle Assessment. Environmental Science & Technology, 2013, 47, 9388-9396.	10.0	30
79	On the â€œrigorous proof of fuzzy error propagation with matrix-based LCIâ€ International Journal of Life Cycle Assessment, 2013, 18, 516-519.	4.7	5
80	Assessment of Low Carbon Energy Technologies: Fossil Fuels and CCS. Energy Procedia, 2013, 37, 2637-2644.	1.8	2
81	Multiâ€scale modeling for sustainable chemical production. Biotechnology Journal, 2013, 8, 973-984.	3.5	14
82	Techno-Ecological Synergy as a Path Toward Sustainability of a North American Residential System. Environmental Science & Technology, 2013, 47, 1985-1993.	10.0	28
83	The evolving metabolism of a developing economy — Insight from India's growth. , 2012, , .		0
84	Reinforced Wind Turbine Blades - An Environmental Life Cycle Evaluation. Environmental Science & Technology, 2012, 46, 9785-9792.	10.0	16
85	Assessing Resource Intensity and Renewability of Cellulosic Ethanol Technologies Using Eco-LCA. Environmental Science & Technology, 2012, 46, 2436-2444.	10.0	45
86	Insights into sustainability from complexity analysis of life cycle networks: A case study on gasoline and bio-fuel networks. , 2011, , .		4
87	Appreciating the Role of Thermodynamics in LCA Improvement Analysis via an Application to Titanium Dioxide Nanoparticles. Environmental Science & Technology, 2011, 45, 3054-3061.	10.0	21
88	The path to a sustainable chemical industry: progress and problems. Current Opinion in Chemical Engineering, 2011, 1, 64-68.	7.8	21
89	Using Thermodynamics and Statistics to Improve the Quality of Life-Cycle Inventory Data. , 2011, , 235-248.		2
90	Accounting for Resource Use by Thermodynamics. , 2011, , 87-110.		3

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91	Developing Sustainable Technology: Metrics From Thermodynamics. , 2011, , 249-264.		3
92	An Entropy-Based Metric for a Transformational Technology Development. , 2011, , 133-162.		2
93	Thermodynamic Analysis of Resources Used in Manufacturing Processes. , 2011, , 163-189.		10
94	Life Cycle of Titanium Dioxide Nanoparticle Production. Journal of Industrial Ecology, 2011, 15, 81-95.	5.5	54
95	Incorporating Ecosystem Services Into Life Cycle Assessment. Journal of Industrial Ecology, 2011, 15, 477-478.	5.5	20
96	A life cycle framework for the investigation of environmentally benign nanoparticles and products. Physica Status Solidi - Rapid Research Letters, 2011, 5, 312-317.	2.4	28
97	Comparative life cycle assessment of beneficial applications for scrap tires. Clean Technologies and Environmental Policy, 2011, 13, 19-35.	4.1	90
98	Emergy analysis of ethanol production from low-input, high-diversity (LIHD) grasslands on degraded farmland. , 2011, , .		1
99	Emergy analysis using US economic inputâ€"output models with applications to life cycles of gasoline and corn ethanol. Ecological Modelling, 2010, 221, 1807-1818.	2.5	65
100	Towards sustainability of engineered processes: Designing self-reliant networks of technologicalâ€"ecological systems. Computers and Chemical Engineering, 2010, 34, 1413-1420.	3.8	21
101	Effects of a carbon price in the U.S. on economic sectors, resource use, and emissions: An inputâ€"output approach. Energy Policy, 2010, 38, 3527-3536.	8.8	55
102	Integrated multiscale modeling of economic-environmental systems for assessing Biocomplexity of material use. , 2010, , .		0
103	Enhancing the reliability of C and N accounting in economic activities : Integration of bio-geochemical cycle with Eco-LCA. , 2010, , .		1
104	Accounting for Ecosystem Services in Life Cycle Assessment, Part I: A Critical Review. Environmental Science & Technology, 2010, 44, 2232-2242.	10.0	180
105	Accounting for Ecosystem Services in Life Cycle Assessment, Part II: Toward an Ecologically Based LCA. Environmental Science & Technology, 2010, 44, 2624-2631.	10.0	189
106	Thermodynamic Metrics for Aggregation of Natural Resources in Life Cycle Analysis: Insight via Application to Some Transportation Fuels. Environmental Science & Technology, 2010, 44, 800-807.	10.0	61
107	Prior Checking and Moving Horizon Smoothing for Improved Particle Filtering. Industrial & Engineering Chemistry Research, 2010, 49, 4197-4209.	3.7	0
108	Comparative life cycle assessment: Reinforcing wind turbine blades with carbon nanofibers. , 2010, , .		14

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109	Industrial ecology network optimization with life cycle metrics. , 2010, , .		0
110	Enhancing the reliability of C & N accounting in economic activities: Integration of bio-geochemical cycles with Eco-LCA. , 2010, , .		1
111	Comprehensive Study of Cellulosic Ethanol Using Hybrid Eco-LCA. , 2010, , 434-456.		1
112	Integrated estimation of measurement error with empirical process modelingâ€"A hierarchical Bayes approach. AICHE Journal, 2009, 55, 2883-2895.	3.6	6
113	Carbon Nanofiber Polymer Composites: Evaluation of Life Cycle Energy Use. Environmental Science & Technology, 2009, 43, 2078-2084.	10.0	105
114	Preliminary thoughts on the application of thermodynamics to the development of sustainability criteria. , 2009, , .		13
115	Eco-LCA: A tool for quantifying the role of ecological resources in LCA. , 2009, , .		2
116	Modeling the risks to complex industrial networks due to loss of natural capital. , 2009, , .		11
117	Technological-ecological networks for sustainable process design. , 2009, , .		0
118	1,3-Propanediol from Fossils versus Biomass: A Life Cycle Evaluation of Emissions and Ecological Resources. Industrial & Engineering Chemistry Research, 2009, 48, 8068-8082.	3.7	69
119	Thermodynamic Input-Output Analysis of Economic and Ecological Systems. Eco-efficiency in Industry and Science, 2009, , 459-490.	0.1	2
120	Toward Sustainability by Designing Networks of Technological-Ecological Systems. , 2009, , 167-183.		1
121	Assessing the Risks to Complex Industrial Networks Due to Loss of Natural Capital and Its Implications to Process Design. , 2009, , 569-570.		0
122	Multiscale statistical process control using wavelet packets. AICHE Journal, 2008, 54, 2366-2378.	3.6	42
123	Resource intensities of chemical industry sectors in the United States via inputâ€"output network models. Computers and Chemical Engineering, 2008, 32, 2050-2064.	3.8	19
124	Carbon Nanofiber Production. Journal of Industrial Ecology, 2008, 12, 394-410.	5.5	137
125	Life Cycle Assessment of an Ionic Liquid versus Molecular Solvents and Their Applications. Environmental Science & Technology, 2008, 42, 1724-1730.	10.0	155
126	Exergy: Its Potential and Limitations in Environmental Science and Technology. Environmental Science & Technology, 2008, 42, 2221-2232.	10.0	270

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127	Assessing life cycle environmental implications of polymer nanocomposites. , 2008, , .		12
128	Energetic and environmental evaluation of titanium dioxide nanoparticles. , 2008, , .		2
129	Statistical Evaluation of Input-Side Metrics for Life Cycle Impact Assessment of Emerging Technologies. Electronics and the Environment, IEEE International Symposium on, 2007, , .	0.0	4
130	Life Cycle Energy Analysis and Environmental Life Cycle Assessment of Carbon Nanofibers Production. , 2007, , .		17
131	Bayesian latent variable regression via Gibbs sampling: methodology and practical aspects. Journal of Chemometrics, 2007, 21, 578-591.	1.3	11
132	Rectification of multiscale data with application to life cycle inventories. AICHE Journal, 2007, 53, 876-890.	3.6	10
133	Industrial and ecological cumulative exergy consumption of the United States via the 1997 inputâ€“output benchmark model. Energy, 2007, 32, 1560-1592.	8.8	135
134	Toward Bayesian chemometricsâ€"A tutorial on some recent advances. Analytica Chimica Acta, 2007, 602, 1-16.	5.4	21
135	Bayesian estimation via sequential Monte Carlo samplingâ€"Constrained dynamic systems. Automatica, 2007, 43, 1615-1622.	5.0	95
136	Enhancing Lifeâ€Cycle Inventories via Reconciliation with the Laws of Thermodynamics. Journal of Industrial Ecology, 2007, 11, 5-25.	5.5	22
137	Particle filtering and moving horizon estimation. Computers and Chemical Engineering, 2006, 30, 1529-1541.	3.8	260
138	Flow of Natural versus Economic Capital in Industrial Supply Networks and Its Implications to Sustainability. Environmental Science & Technology, 2005, 39, 9759-9769.	10.0	49
139	Promise and problems of emergy analysis. Ecological Modelling, 2004, 178, 215-225.	2.5	282
140	Clustering in wavelet domain: A multiresolution ART network for anomaly detection. AICHE Journal, 2004, 50, 2455-2466.	3.6	23
141	Hierarchical thermodynamic metrics for evaluating the environmental sustainability of industrial processes. Environmental Progress, 2004, 23, 302-314.	0.7	36
142	Thermodynamic Accounting of Ecosystem Contribution to Economic Sectors with Application to 1992 U.S. Economy. Environmental Science & Technology, 2004, 38, 4810-4827.	10.0	105
143	Bayesian Estimation via Sequential Monte Carlo Sampling:Â Unconstrained Nonlinear Dynamic Systems. Industrial & Engineering Chemistry Research, 2004, 43, 4012-4025.	3.7	69
144	Expanding Exergy Analysis to Account for Ecosystem Products and Services. Environmental Science & Technology, 2004, 38, 3768-3777.	10.0	174

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145	Bayesian Estimation by Sequential Monte Carlo Sampling: Application to High-Dimensional Nonlinear Dynamic Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 341-346.	0.4	1
146	Bayesian Estimation of Unconstrained Nonlinear Dynamic Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 263-268.	0.4	2
147	Multiscale SPC using wavelets: Theoretical analysis and properties. AIChE Journal, 2003, 49, 939-958.	3.6	81
148	The quest for sustainability: Challenges for process systems engineering. AIChE Journal, 2003, 49, 1350-1358.	3.6	199
149	Process modeling by Bayesian latent variable regression. AIChE Journal, 2002, 48, 1775-1793.	3.6	26
150	Bayesian principal component analysis. Journal of Chemometrics, 2002, 16, 576-595.	1.3	49
151	Comparison of multivariate statistical process monitoring methods with applications to the Eastman challenge problem. Computers and Chemical Engineering, 2002, 26, 161-174.	3.8	173
152	A thermodynamic framework for ecologically conscious process systems engineering. Computers and Chemical Engineering, 2002, 26, 269-282.	3.8	99
153	Binary, ternary and quaternary compound former/nonformer prediction via Mendeleev number. Journal of Alloys and Compounds, 2001, 317-318, 26-38.	5.5	68
154	Multiscale Bayesian Rectification of Data from Linear Steady-State and Dynamic Systems without Accurate Models. Industrial & Engineering Chemistry Research, 2001, 40, 261-274.	3.7	16
155	Multiscale Bayesian Estimation and Data Rectification. Computational Imaging and Vision, 2001, , 69-110.	0.6	2
156	Multiscale Statistical Process Control and Model-Based Denoising. Data Handling in Science and Technology, 2000, 22, 411-436.	3.1	5
157	A multiscale, Bayesian and error-in-variables approach for linear dynamic data rectification. Computers and Chemical Engineering, 2000, 24, 445-451.	3.8	15
158	A thermodynamic framework for ecologically conscious process systems engineering. Computers and Chemical Engineering, 2000, 24, 1767-1773.	3.8	90
159	Comparison of statistical process monitoring methods: application to the Eastman challenge problem. Computers and Chemical Engineering, 2000, 24, 175-181.	3.8	72
160	Interplay of large materials databases, semi-empirical methods, neuro-computing and first principle calculations for ternary compound former/nonformer prediction. Engineering Applications of Artificial Intelligence, 2000, 13, 497-505.	8.1	17
161	Multiscale Methods for Denoising and Compression. Data Handling in Science and Technology, 2000, 22, 119-150.	3.1	18
162	A common framework for the unification of neural, chemometric and statistical modeling methods. Analytica Chimica Acta, 1999, 384, 227-247.	5.4	22

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163	On-line multiscale filtering of random and gross errors without process models. AICHE Journal, 1999, 45, 1041-1058.	3.6	100
164	Multiscale analysis and modeling using wavelets. Journal of Chemometrics, 1999, 13, 415-434.	1.3	162
165	Multiscale PCA with application to multivariate statistical process monitoring. AICHE Journal, 1998, 44, 1596-1610.	3.6	738
166	Unification of neural and statistical modeling methods that combine inputs by linear projection. Computers and Chemical Engineering, 1998, 22, 1859-1878.	3.8	17
167	Unification of neural and statistical methods as applied to materials structure-property mapping. Journal of Alloys and Compounds, 1998, 279, 39-46.	5.5	11
168	Multiscale rectification of random errors without fundamental process models. Computers and Chemical Engineering, 1997, 21, S1167-S1172.	3.8	15
169	Compression of chemical process data by functional approximation and feature extraction. AICHE Journal, 1996, 42, 477-492.	3.6	45
170	Multifractal characterization of flow in circulating fluidized beds. The Chemical Engineering Journal and the Biochemical Engineering Journal, 1996, 64, 107-115.	0.1	4
171	Ein Ansatz zur automatischen Umwandlung von Rohdaten in Regeln. Teil 2: Eine Fallstudie. Automatisierungstechnik, 1996, 44, 138-145.	0.8	4
172	Nonmonotonic Reasoning: The Synthesis of Operating Procedures in Chemical Plants. Advances in Chemical Engineering, 1995, 22, 313-376.	0.9	0
173	Empirical Learning through Neural Networks: The Wave-Net Solution. Advances in Chemical Engineering, 1995, , 437-484.	0.9	3
174	Reasoning in Time: Modeling, Analysis, and Pattern Recognition of Temporal Process Trends. Advances in Chemical Engineering, 1995, , 485-548.	0.9	16
175	â€žDatabase miningâ€¡ mit Hilfe von Trends, Wavelet-Transformation und KlassifizierungsbÃumen. Chemie-Ingenieur-Technik, 1994, 66, 541-543.	0.8	0
176	Analysis of operating data for evaluation, diagnosis and control of batch operations. Journal of Process Control, 1994, 4, 179-194.	3.3	36
177	Representation of process trendsâ€"III. Multiscale extraction of trends from process data. Computers and Chemical Engineering, 1994, 18, 267-302.	3.8	110
178	Representation of process trendsâ€"IV. Induction of real-time patterns from operating data for diagnosis and supervisory control. Computers and Chemical Engineering, 1994, 18, 303-332.	3.8	93
179	Learning at Multiple Resolutions: Wavelets as Basis Functions in Artificial Neural Networks, and Inductive Decision Trees. Kluwer International Series in Engineering and Computer Science, 1994, , 139-174.	0.2	2
180	Wave-net: a multiresolution, hierarchical neural network with localized learning. AICHE Journal, 1993, 39, 57-81.	3.6	230

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181	Exergy and Material Flow in Industrial and Ecological Systems. , 0, , 292-333.		1
182	Energy Resources and Use: The Present Situation, Possible Sustainable Paths to the Future, and the Thermodynamic Perspective. , 0, , 212-232.		2
183	Energy and Exergy: Does One Need Both Concepts for a Study of Resources Use?. , 0, , 45-86.		0
184	Thoughts on the Application of Thermodynamics to the Development of Sustainability Science. , 0, , 477-488.		1
185	Assessing the Life Cycle Environmental Implications of Nanomanufacturing: Opportunities and Challenges. , 0, , 19-42.		2