# 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 | Multiscale PCA with application to multivariate statistical process monitoring. AICHE Journal, 1998, 44, 1596-1610. | 3.6 | 738 |
| 2 | Promise and problems of emergy analysis. Ecological Modelling, 2004, 178, 215-225. | 2.5 | 282 |
| 3 | Exergy: Its Potential and Limitations in Environmental Science and Technology. Environmental Science & Technology, 2008, 42, 2221-2232. | 10.0 | 270 |
| 4 | Particle filtering and moving horizon estimation. Computers and Chemical Engineering, 2006, 30, 1529-1541. | 3.8 | 260 |
| 5 | Wave-net: a multiresolution, hierarchical neural network with localized learning. AICHE Journal, 1993, 39, 57-81. | 3.6 | 230 |
| 6 | The quest for sustainability: Challenges for process systems engineering. AICHE Journal, 2003, 49, 1350-1358. | 3.6 | 199 |
| 7 | 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 |
| 8 | Accounting for Ecosystem Services in Life Cycle Assessment, Part I: A Critical Review. Environmental Science & Technology, 2010, 44, 2232-2242. | 10.0 | 180 |
| 9 | Expanding Exergy Analysis to Account for Ecosystem Products and Services. Environmental Science & Technology, 2004, 38, 3768-3777. | 10.0 | 174 |
| 10 | 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 |
| 11 | Multiscale analysis and modeling using wavelets. Journal of Chemometrics, 1999, 13, 415-434. | 1.3 | 162 |
| 12 | Life Cycle Assessment of an Ionic Liquid versus Molecular Solvents and Their Applications. Environmental Science & Technology, 2008, 42, 1724-1730. | 10.0 | 155 |
| 13 | Carbon Nanofiber Production. Journal of Industrial Ecology, 2008, 12, 394-410. | 5.5 | 137 |
| 14 | 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 |
| 15 | 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 |
| 16 | Representation of process trendsâ€"III. Multiscale extraction of trends from process data. Computers and Chemical Engineering, 1994, 18, 267-302. | 3.8 | 110 |
| 17 | Techno-Ecological Synergy: A Framework for Sustainable Engineering. Environmental Science & Technology, 2015, 49, 1752-1760. | 10.0 | 110 |
| 18 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Carbon Nanofiber Polymer Composites: Evaluation of Life Cycle Energy Use. Environmental Science & Technology, 2009, 43, 2078-2084. | 10.0 | 105 |
| 20 | On-line multiscale filtering of random and gross errors without process models. AICHE Journal, 1999, 45, 1041-1058. | 3.6 | 100 |
| 21 | A thermodynamic framework for ecologically conscious process systems engineering. Computers and Chemical Engineering, 2002, 26, 269-282. | 3.8 | 99 |
| 22 | Bayesian estimation via sequential Monte Carlo samplingâ€"Constrained dynamic systems. Automatica, 2007, 43, 1615-1622. | 5.0 | 95 |
| 23 | 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 |
| 24 | A thermodynamic framework for ecologically conscious process systems engineering. Computers and Chemical Engineering, 2000, 24, 1767-1773. | 3.8 | 90 |
| 25 | Comparative life cycle assessment of beneficial applications for scrap tires. Clean Technologies and Environmental Policy, 2011, 13, 19-35. | 4.1 | 90 |
| 26 | Multiscale SPC using wavelets: Theoretical analysis and properties. AICHE Journal, 2003, 49, 939-958. | 3.6 | 81 |
| 27 | Comparison of statistical process monitoring methods: application to the Eastman challenge problem. Computers and Chemical Engineering, 2000, 24, 175-181. | 3.8 | 72 |
| 28 | 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 |
| 29 | Bayesian Estimation via Sequential Monte Carlo Sampling:Â Unconstrained Nonlinear Dynamic Systems. Industrial & Engineering Chemistry Research, 2004, 43, 4012-4025. | 3.7 | 69 |
| 30 | 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 |
| 31 | Binary, ternary and quaternary compound former/nonformer prediction via Mendeleev number. Journal of Alloys and Compounds, 2001, 317-318, 26-38. | 5.5 | 68 |
| 32 | 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 |
| 33 | 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 |
| 34 | 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 |
| 35 | Life Cycle of Titanium Dioxide Nanoparticle Production. Journal of Industrial Ecology, 2011, 15, 81-95. | 5.5 | 54 |
| 36 | Bayesian principal component analysis. Journal of Chemometrics, 2002, 16, 576-595. | 1.3 | 49 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | 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 |
| 38 | 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 |
| 39 | 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 |
| 40 | Compression of chemical process data by functional approximation and feature extraction. AICHE Journal, 1996, 42, 477-492. | 3.6 | 45 |
| 41 | Assessing Resource Intensity and Renewability of Cellulosic Ethanol Technologies Using Eco-LCA. Environmental Science & Technology, 2012, 46, 2436-2444. | 10.0 | 45 |
| 42 | Multiscale statistical process control using wavelet packets. AICHE Journal, 2008, 54, 2366-2378. | 3.6 | 42 |
| 43 | 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 |
| 44 | Process to planet: A multiscale modeling framework toward sustainable engineering. AICHE Journal, 2015, 61, 3332-3352. | 3.6 | 40 |
| 45 | 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 |
| 46 | Economic Dependence of U.S. Industrial Sectors on Animal-Mediated Pollination Service. Environmental Science & Technology, 2015, 49, 14441-14451. | 10.0 | 38 |
| 47 | Toward Sustainable Chemical Engineering: The Role of Process Systems Engineering. Annual Review of Chemical and Biomolecular Engineering, 2019, 10, 265-288. | 6.8 | 37 |
| 48 | Analysis of operating data for evaluation, diagnosis and control of batch operations. Journal of Process Control, 1994, 4, 179-194. | 3.3 | 36 |
| 49 | Hierarchical thermodynamic metrics for evaluating the environmental sustainability of industrial processes. Environmental Progress, 2004, 23, 302-314. | 0.7 | 36 |
| 50 | Claiming Sustainability: Requirements and Challenges. ACS Sustainable Chemistry and Engineering, 2018, 6, 3632-3639. | 6.7 | 36 |
| 51 | Ecosystem Services in Life Cycle Assessment while Encouraging Technoâ€Ecological Synergies. Journal of Industrial Ecology, 2019, 23, 347-360. | 5.5 | 35 |
| 52 | Assessing the capacity of local ecosystems to meet industrial demand for ecosystem services. AICHE Journal, 2016, 62, 3319-3333. | 3.6 | 34 |
| 53 | Methods and tools for sustainable process design. Current Opinion in Chemical Engineering, 2014, 6, 69-74. | 7.8 | 33 |
| 54 | Ecosystem services in life cycle assessment - Part 1: A computational framework. Journal of Cleaner Production, 2018, 197, 314-322. | 9.3 | 31 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Accounting for the Biogeochemical Cycle of Nitrogen in Input-Output Life Cycle Assessment. Environmental Science & Technology, 2013, 47, 9388-9396. | 10.0 | 30 |
| 56 | Toward sustainable circular economies: A computational framework for assessment and design. Journal of Cleaner Production, 2021, 295, 126353. | 9.3 | 30 |
| 57 | 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 |
| 58 | 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 |
| 59 | Techno-Ecological Synergy as a Path Toward Sustainability of a North American Residential System. Environmental Science & Technology, 2013, 47, 1985-1993. | 10.0 | 28 |
| 60 | Sustainable process design by the process to planet framework. AICHE Journal, 2015, 61, 3320-3331. | 3.6 | 28 |
| 61 | Sustainable product design: A life-cycle approach. Chemical Engineering Science, 2020, 217, 115508. | 3.8 | 27 |
| 62 | Process modeling by Bayesian latent variable regression. AICHE Journal, 2002, 48, 1775-1793. | 3.6 | 26 |
| 63 | A Water-Withdrawal Inputâ€“Output Model of the Indian Economy. Environmental Science & Technology, 2016, 50, 1313-1321. | 10.0 | 26 |
| 64 | 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 |
| 65 | 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 |
| 66 | Clustering in wavelet domain: A multiresolution ART network for anomaly detection. AICHE Journal, 2004, 50, 2455-2466. | 3.6 | 23 |
| 67 | Allocation Games: Addressing the Ill-Posed Nature of Allocation in Life-Cycle Inventories. Environmental Science & Technology, 2015, 49, 7996-8003. | 10.0 | 23 |
| 68 | Designing biofuel supply chains while mitigating harmful algal blooms with treatment wetlands. Computers and Chemical Engineering, 2019, 126, 113-127. | 3.8 | 23 |
| 69 | A common framework for the unification of neural, chemometric and statistical modeling methods. Analytica Chimica Acta, 1999, 384, 227-247. | 5.4 | 22 |
| 70 | Enhancing Lifeâ€Cycle Inventories via Reconciliation with the Laws of Thermodynamics. Journal of Industrial Ecology, 2007, 11, 5-25. | 5.5 | 22 |
| 71 | Air quality and human health impacts of grasslands and shrublands in the United States. Atmospheric Environment, 2018, 182, 193-199. | 4.1 | 22 |
| 72 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Process Systems Engineering Perspective on the Design of Materials and Molecules. Industrial & Engineering Chemistry Research, 2021, 60, 5194-5206. | 3.7 | 22 |
| 74 | Toward Bayesian chemometricsâ€"A tutorial on some recent advances. Analytica Chimica Acta, 2007, 602, 1-16. | 5.4 | 21 |
| 75 | Towards sustainability of engineered processes: Designing self-reliant networks of technologicalâ€"ecological systems. Computers and Chemical Engineering, 2010, 34, 1413-1420. | 3.8 | 21 |
| 76 | 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 |
| 77 | The path to a sustainable chemical industry: progress and problems. Current Opinion in Chemical Engineering, 2011, 1, 64-68. | 7.8 | 21 |
| 78 | Ecosystems as unit operations for local technoâ€ecological synergy: Integrated process design with treatment wetlands. AIChE Journal, 2018, 64, 2390-2407. | 3.6 | 21 |
| 79 | Incorporating Ecosystem Services Into Life Cycle Assessment. Journal of Industrial Ecology, 2011, 15, 477-478. | 5.5 | 20 |
| 80 | 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 |
| 81 | Connecting air quality regulating ecosystem services with beneficiaries through quantitative serviceshed analysis. Ecosystem Services, 2020, 41, 101057. | 5.4 | 20 |
| 82 | 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 |
| 83 | Multiscale Methods for Denoising and Compression. Data Handling in Science and Technology, 2000, 22, 119-150. | 3.1 | 18 |
| 84 | 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 |
| 85 | A perspective on the role of uncertainty in sustainability science and engineering. Resources, Conservation and Recycling, 2021, 164, 105140. | 10.8 | 18 |
| 86 | Unification of neural and statistical modeling methods that combine inputs by linear projection. Computers and Chemical Engineering, 1998, 22, 1859-1878. | 3.8 | 17 |
| 87 | 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 |
| 88 | Life Cycle Energy Analysis and Environmental Life Cycle Assessment of Carbon Nanofibers Production. , 2007, , . |  | 17 |
| 89 | 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 |
| 90 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Reinforced Wind Turbine Blades - An Environmental Life Cycle Evaluation. Environmental Science & Technology, 2012, 46, 9785-9792. | 10.0 | 16 |
| 92 | Reasoning in Time: Modeling, Analysis, and Pattern Recognition of Temporal Process Trends. Advances in Chemical Engineering, 1995, , 485-548. | 0.9 | 16 |
| 93 | Multiscale rectification of random errors without fundamental process models. Computers and Chemical Engineering, 1997, 21, S1167-S1172. | 3.8 | 15 |
| 94 | A multiscale, Bayesian and error-in-variables approach for linear dynamic data rectification. Computers and Chemical Engineering, 2000, 24, 445-451. | 3.8 | 15 |
| 95 | Ethanol from Indian agro-industrial lignocellulosic biomass: an emergy evaluation. Clean Technologies and Environmental Policy, 2016, 18, 2625-2634. | 4.1 | 15 |
| 96 | Comparative life cycle assessment: Reinforcing wind turbine blades with carbon nanofibers. , 2010, , . | | 14 |
| 97 | Multiâ€scale modeling for sustainable chemical production. Biotechnology Journal, 2013, 8, 973-984. | 3.5 | 14 |
| 98 | Preliminary thoughts on the application of thermodynamics to the development of sustainability criteria. , 2009, , . | | 13 |
| 99 | Footprints of carbon and nitrogen: Revisiting the paradigm and exploring their nexus for decision making. Ecological Indicators, 2015, 53, 49-60. | 6.3 | 13 |
| 100 | Process to Planet Approach to Sustainable Process Design: Multiple Objectives and Byproducts. Theoretical Foundations of Chemical Engineering, 2017, 51, 936-948. | 0.7 | 13 |
| 101 | Assessing life cycle environmental implications of polymer nanocomposites. , 2008, , . | | 12 |
| 102 | The carbon-nitrogen nexus of transportation fuels. Journal of Cleaner Production, 2018, 180, 790-803. | 9.3 | 12 |
| 103 | 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 |
| 104 | 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 |
| 105 | Bayesian latent variable regression via Gibbs sampling: methodology and practical aspects. Journal of Chemometrics, 2007, 21, 578-591. | 1.3 | 11 |
| 106 | Modeling the risks to complex industrial networks due to loss of natural capital. , 2009, , . | | 11 |
| 107 | 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 |
| 108 | Techno-ecologically synergistic foodâ€"energyâ€"water systems can meet human and ecosystem needs. Energy and Environmental Science, 2021, 14, 3700-3716. | 30.8 | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Rectification of multiscale data with application to life cycle inventories. AICHE Journal, 2007, 53, 876-890. | 3.6 | 10 |
| 110 | Thermodynamic Analysis of Resources Used in Manufacturing Processes. , 2011, , 163-189. | | 10 |
| 111 | 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 |
| 112 | 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 |
| 113 | Biosolids management with net-zero CO2 emissions: a techno-ecological synergy design. Clean Technologies and Environmental Policy, 2017, 19, 2099-2111. | 4.1 | 9 |
| 114 | Including Ecosystem Services in Life Cycle Assessment: Methodology and Application to Urban Farms. Procedia CIRP, 2019, 80, 287-291. | 1.9 | 9 |
| 115 | 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 |
| 116 | Integrating life-cycle assessment and choice analysis for alternative fuel valuation. Ecological Economics, 2014, 102, 83-93. | 5.7 | 8 |
| 117 | Empirical Comparison of Inputâ€Output Methods for Life Cycle Assessment. Journal of Industrial Ecology, 2014, 18, 734-746. | 5.5 | 8 |
| 118 | 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 |
| 119 | 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 |
| 120 | Integrated estimation of measurement error with empirical process modelingâ€"A hierarchical Bayes approach. AICHE Journal, 2009, 55, 2883-2895. | 3.6 | 6 |
| 121 | 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 |
| 122 | Life Cycle Comparison of Coal Gasification by Conventional versus Calcium Looping Processes. Industrial & Engineering Chemistry Research, 2014, 53, 18910-18919. | 3.7 | 6 |
| 123 | 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 |
| 124 | Carbon Footprint of Biomimetic Carbon Fixation by Immobilizing Natureâ€™s CO<sub>2</sub>-sequestering Enzyme and Regenerating Its Energy Carrier. ACS Sustainable Chemistry and Engineering, 2020, 8, 16833-16841. | 6.7 | 6 |
| 125 | Constructed Wetlands as Unit Operations in Chemical Process Design: Benefits and Simulation. Computers and Chemical Engineering, 2021, 153, 107454. | 3.8 | 6 |
| 126 | Multi-scale sustainable engineering: Integrated design of reaction networks, life cycles, and economic sectors. Computers and Chemical Engineering, 2022, 156, 107578. | 3.8 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Multiscale Statistical Process Control and Model-Based Denoising. Data Handling in Science and Technology, 2000, 22, 411-436. | 3.1 | 5 |
| 128 | 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 |
| 129 | Monetized value of the environmental, health and resource externalities of soy biodiesel. Energy Economics, 2015, 47, 18-24. | 12.1 | 5 |
| 130 | Including Ecosystem Services in Sustainable Process Design across Multiple Spatial Scales. Computer Aided Chemical Engineering, 2018, 44, 1837-1842. | 0.5 | 5 |
| 131 | Resource Utilization and Destruction in Indian Industrial Sectors: An Exergy Analysis. Industrial & Engineering Chemistry Research, 2019, 58, 11566-11575. | 3.7 | 5 |
| 132 | Designing hybrid life cycle assessment models based on uncertainty and complexity. International Journal of Life Cycle Assessment, 2020, 25, 2290-2308. | 4.7 | 5 |
| 133 | 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 |
| 134 | Designing industrial landscapes for mitigating air pollution with <scp>spatiallyâ€explicit technoâ€ecological</scp> synergy. AICHE Journal, 2021, 67, e17347. | 3.6 | 5 |
| 135 | Multifractal characterization of flow in circulating fluidized beds. The Chemical Engineering Journal and the Biochemical Engineering Journal, 1996, 64, 107-115. | 0.1 | 4 |
| 136 | Ein Ansatz zur automatischen Umwandlung von Rohdaten in Regeln. Teil 2: Eine Fallstudie. Automatisierungstechnik, 1996, 44, 138-145. | 0.8 | 4 |
| 137 | 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 |
| 138 | Insights into sustainability from complexity analysis of life cycle networks: A case study on gasoline and bio-fuel networks. , 2011, , . | | 4 |
| 139 | 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 |
| 140 | The evolving metabolism of a developing economy: Indiaâ€™s exergy flows over four decades. Applied Energy, 2017, 206, 851-857. | 10.1 | 4 |
| 141 | Meeting the challenge of water sustainability: The role of process systems engineering. AICHE Journal, 2021, 67, e17113. | 3.6 | 4 |
| 142 | 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 |
| 143 | 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 |
| 144 | Empirical Learning through Neural Networks: The Wave-Net Solution. Advances in Chemical Engineering, 1995, , 437-484. | 0.9 | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 145 | Accounting for Resource Use by Thermodynamics. , 2011, , 87-110. | | 3 |
| 146 | Developing Sustainable Technology: Metrics From Thermodynamics. , 2011, , 249-264. | | 3 |
| 147 | Designing Climate Action and Regulations for sustainaBility (DCARB): Framework and campus application. Journal of Cleaner Production, 2022, 356, 131690. | 9.3 | 3 |
| 148 | Bayesian Estimation of Unconstrained Nonlinear Dynamic Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 263-268. | 0.4 | 2 |
| 149 | Energetic and environmental evaluation of titanium dioxide nanoparticles. , 2008, , . | | 2 |
| 150 | Eco-LCA: A tool for quantifying the role of ecological resources in LCA. , 2009, , . | | 2 |
| 151 | Using Thermodynamics and Statistics to Improve the Quality of Life-Cycle Inventory Data. , 2011, , 235-248. | | 2 |
| 152 | Energy Resources and Use: The Present Situation, Possible Sustainable Paths to the Future, and the Thermodynamic Perspective. , 0, , 212-232. | | 2 |
| 153 | An Entropy-Based Metric for a Transformational Technology Development. , 2011, , 133-162. | | 2 |
| 154 | Assessment of Low Carbon Energy Technologies: Fossil Fuels and CCS. Energy Procedia, 2013, 37, 2637-2644. | 1.8 | 2 |
| 155 | Engineering, markets, and human behavior: an essential integration for decisions toward sustainability. Current Opinion in Chemical Engineering, 2019, 26, 164-169. | 7.8 | 2 |
| 156 | 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 |
| 157 | Assessing the Life Cycle Environmental Implications of Nanomanufacturing: Opportunities and Challenges. , 0, , 19-42. | | 2 |
| 158 | Thermodynamic Input-Output Analysis of Economic and Ecological Systems. Eco-efficiency in Industry and Science, 2009, , 459-490. | 0.1 | 2 |
| 159 | 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 |
| 160 | Multiscale Bayesian Estimation and Data Rectification. Computational Imaging and Vision, 2001, , 69-110. | 0.6 | 2 |
| 161 | Exergy and Material Flow in Industrial and Ecological Systems. , 0, , 292-333. | | 1 |
| 162 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 163 | Enhancing the reliability of C and N accounting in economic activities : Integration of bio-geochemical cycle with Eco-LCA. , 2010, , . | | 1 |
| 164 | Enhancing the reliability of C & N accounting in economic activities: Integration of bio-geochemical cycles with Eco-LCA. , 2010, , . | | 1 |
| 165 | Thoughts on the Application of Thermodynamics to the Development of Sustainability Science. , 0, , 477-488. | | 1 |
| 166 | Emergy analysis of ethanol production from low-input, high-diversity (LIHD) grasslands on degraded farmland. , 2011, , . | | 1 |
| 167 | An Integrated Multiscale Modeling Framework for Sustainable Process Design Applications. Computer Aided Chemical Engineering, 2015, , 585-604. | 0.5 | 1 |
| 168 | Including Nature in Engineering Decisions for Sustainability. , 2017, , 107-116. | | 1 |
| 169 | Comprehensive Study of Cellulosic Ethanol Using Hybrid Eco-LCA. , 2010, , 434-456. | | 1 |
| 170 | Toward Sustainability by Designing Networks of Technological-Ecological Systems. , 2009, , 167-183. | | 1 |
| 171 | Integrating Market Models and Price Effects in a Multiscale Sustainable Process Design Framework. Computer Aided Chemical Engineering, 2019, , 175-180. | 0.5 | 1 |
| 172 | â€žDatabase miningâ€ï¸•mit Hilfe von Trends, Wavelet-Transformation und KlassifizierungsbÃumen. Chemie-Ingenieur-Technik, 1994, 66, 541-543. | 0.8 | 0 |
| 173 | Nonmonotonic Reasoning: The Synthesis of Operating Procedures in Chemical Plants. Advances in Chemical Engineering, 1995, 22, 313-376. | 0.9 | 0 |
| 174 | Technological-ecological networks for sustainable process design. , 2009, , . | | 0 |
| 175 | Integrated multiscale modeling of economic-environmental systems for assessing Biocomplexity of material use. , 2010, , . | | 0 |
| 176 | Prior Checking and Moving Horizon Smoothing for Improved Particle Filtering. Industrial & Engineering Chemistry Research, 2010, 49, 4197-4209. | 3.7 | 0 |
| 177 | Industrial ecology network optimization with life cycle metrics. , 2010, , . | | 0 |
| 178 | Energy and Exergy: Does One Need Both Concepts for a Study of Resources Use?. , 0, , 45-86. | | 0 |
| 179 | The evolving metabolism of a developing economy — Insight from India's growth. , 2012, , . | | 0 |
| 180 | N footprint and the nexus between C and N footprints. , 2015, , 195-220. | | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 181 | Including Nature in Engineering for Innovation and Sustainability: Promise, Progress and Peril. Computer Aided Chemical Engineering, 2018, , 53-62. | 0.5 | 0 |
| 182 | Computationally Intensive Nonlinear Regression Methods. , 2020, , 505-517. | | 0 |
| 183 | Assessing the Risks to Complex Industrial Networks Due to Loss of Natural Capital and Its Implications to Process Design. , 2009, , 569-570. | | 0 |
| 184 | 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 |
| 185 | Sustainability Assessment in a Geographical Region and of the Activities Performed. , 2020, , 536-561. | | 0 |