

S Joe Qin

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

348
papers

19,857
citations

67
h-index

135
g-index

390
ext. papers

23,950
ext. citations

4.3
avg, IF

7.63
L-index

| # | Paper | IF | Citations |
|-----|---|------|-----------|
| 348 | A survey of industrial model predictive control technology. <i>Control Engineering Practice</i> , 2003 , 11, 733-764 | 3.4 | 2972 |
| 347 | Statistical process monitoring: basics and beyond. <i>Journal of Chemometrics</i> , 2003 , 17, 480-502 | 1.6 | 1061 |
| 346 | Survey on data-driven industrial process monitoring and diagnosis. <i>Annual Reviews in Control</i> , 2012 , 36, 220-234 | 10.3 | 854 |
| 345 | Recursive PCA for adaptive process monitoring. <i>Journal of Process Control</i> , 2000 , 10, 471-486 | 3.9 | 580 |
| 344 | Recursive PLS algorithms for adaptive data modeling. <i>Computers and Chemical Engineering</i> , 1998 , 22, 503-514 | 4 | 449 |
| 343 | Selection of the Number of Principal Components: The Variance of the Reconstruction Error Criterion with a Comparison to Other Methods <i>Industrial & Engineering Chemistry Research</i> , 1999 , 38, 4389-4401 | 3.9 | 377 |
| 342 | Identification of faulty sensors using principal component analysis. <i>AIChE Journal</i> , 1996 , 42, 2797-2812 | 3.6 | 374 |
| 341 | Multimode process monitoring with Bayesian inference-based finite Gaussian mixture models. <i>AIChE Journal</i> , 2008 , 54, 1811-1829 | 3.6 | 369 |
| 340 | Reconstruction-based contribution for process monitoring. <i>Automatica</i> , 2009 , 45, 1593-1600 | 5.7 | 365 |
| 339 | An overview of subspace identification. <i>Computers and Chemical Engineering</i> , 2006 , 30, 1502-1513 | 4 | 357 |
| 338 | Reconstruction-Based Fault Identification Using a Combined Index. <i>Industrial & Engineering Chemistry Research</i> , 2001 , 40, 4403-4414 | 3.9 | 319 |
| 337 | Nonlinear PLS modeling using neural networks. <i>Computers and Chemical Engineering</i> , 1992 , 16, 379-391 | 4 | 314 |
| 336 | Fault detection and diagnosis based on modified independent component analysis. <i>AIChE Journal</i> , 2006 , 52, 3501-3514 | 3.6 | 297 |
| 335 | On unifying multiblock analysis with application to decentralized process monitoring. <i>Journal of Chemometrics</i> , 2001 , 15, 715-742 | 1.6 | 294 |
| 334 | Subspace approach to multidimensional fault identification and reconstruction. <i>AIChE Journal</i> , 1998 , 44, 1813-1831 | 3.6 | 274 |
| 333 | Control performance monitoring: a review and assessment. <i>Computers and Chemical Engineering</i> , 1998 , 23, 173-186 | 4 | 242 |
| 332 | Geometric properties of partial least squares for process monitoring. <i>Automatica</i> , 2010 , 46, 204-210 | 5.7 | 241 |

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| 331 | Demand reduction in building energy systems based on economic model predictive control. <i>Chemical Engineering Science</i> , 2012 , 67, 92-100 | 4.4 | 237 |
| 330 | Process data analytics in the era of big data. <i>AIChE Journal</i> , 2014 , 60, 3092-3100 | 3.6 | 226 |
| 329 | Sequential bottom-up assembly of mechanically stabilized synthetic cells by microfluidics. <i>Nature Materials</i> , 2018 , 17, 89-96 | 27 | 211 |
| 328 | . <i>IEEE Transactions on Industrial Informatics</i> , 2010 , 6, 3-10 | 11.9 | 207 |
| 327 | Multivariate process monitoring and fault diagnosis by multi-scale PCA. <i>Computers and Chemical Engineering</i> , 2002 , 26, 1281-1293 | 4 | 207 |
| 326 | Joint diagnosis of process and sensor faults using principal component analysis. <i>Control Engineering Practice</i> , 1998 , 6, 457-469 | 3.9 | 181 |
| 325 | Quality-relevant and process-relevant fault monitoring with concurrent projection to latent structures. <i>AIChE Journal</i> , 2013 , 59, 496-504 | 3.6 | 179 |
| 324 | A new fault diagnosis method using fault directions in Fisher discriminant analysis. <i>AIChE Journal</i> , 2005 , 51, 555-571 | 3.6 | 170 |
| 323 | A new subspace identification approach based on principal component analysis. <i>Journal of Process Control</i> , 2002 , 12, 841-855 | 3.9 | 162 |
| 322 | A novel dynamic PCA algorithm for dynamic data modeling and process monitoring. <i>Journal of Process Control</i> , 2018 , 67, 1-11 | 3.9 | 157 |
| 321 | MaxSynBio: Avenues Towards Creating Cells from the Bottom Up. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 13382-13392 | 16.4 | 155 |
| 320 | Multiway Gaussian Mixture Model Based Multiphase Batch Process Monitoring. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 8585-8594 | 3.9 | 149 |
| 319 | Reconstruction-Based Contribution for Process Monitoring with Kernel Principal Component Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 7849-7857 | 3.9 | 147 |
| 318 | Determining the number of principal components for best reconstruction. <i>Journal of Process Control</i> , 2000 , 10, 245-250 | 3.9 | 145 |
| 317 | Analysis and generalization of fault diagnosis methods for process monitoring. <i>Journal of Process Control</i> , 2011 , 21, 322-330 | 3.9 | 142 |
| 316 | Multiblock principal component analysis based on a combined index for semiconductor fault detection and diagnosis. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2006 , 19, 159-172 | 2.6 | 141 |
| 315 | Generalized Reconstruction-Based Contributions for Output-Relevant Fault Diagnosis With Application to the Tennessee Eastman Process. <i>IEEE Transactions on Control Systems Technology</i> , 2011 , 19, 1114-1127 | 4.8 | 123 |
| 314 | Detection and identification of faulty sensors in dynamic processes. <i>AIChE Journal</i> , 2001 , 47, 1581-1593 | 3.6 | 119 |

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| 313 | Closed-loop subspace identification: an orthogonal projection approach. <i>Journal of Process Control</i> , 2005 , 15, 53-66 | 3.9 | 117 |
| 312 | An Overview of Nonlinear Model Predictive Control Applications 2000 , 369-392 | | 117 |
| 311 | Fault Detection of Non-Linear Processes Using Kernel Independent Component Analysis. <i>Canadian Journal of Chemical Engineering</i> , 2008 , 85, 526-536 | 2.3 | 113 |
| 310 | Semiconductor manufacturing process control and monitoring: A fab-wide framework. <i>Journal of Process Control</i> , 2006 , 16, 179-191 | 3.9 | 112 |
| 309 | Consistent dynamic PCA based on errors-in-variables subspace identification. <i>Journal of Process Control</i> , 2001 , 11, 661-678 | 3.9 | 111 |
| 308 | Advances and opportunities in machine learning for process data analytics. <i>Computers and Chemical Engineering</i> , 2019 , 126, 465-473 | 4 | 110 |
| 307 | Comparison of four neural net learning methods for dynamic system identification. <i>IEEE Transactions on Neural Networks</i> , 1992 , 3, 122-30 | | 110 |
| 306 | A New Method of Dynamic Latent-Variable Modeling for Process Monitoring. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 6438-6445 | 8.9 | 109 |
| 305 | A Curve Fitting Method for Detecting Valve Stiction in Oscillating Control Loops. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 4549-4560 | 3.9 | 109 |
| 304 | Detection, identification, and reconstruction of faulty sensors with maximized sensitivity. <i>AIChE Journal</i> , 1999 , 45, 1963-1976 | 3.6 | 107 |
| 303 | Reconstruction and analysis of a carbon-core metabolic network for <i>Dunaliella salina</i> . <i>BMC Bioinformatics</i> , 2020 , 21, 1 | 3.6 | 104 |
| 302 | Root cause diagnosis of plant-wide oscillations using Granger causality. <i>Journal of Process Control</i> , 2014 , 24, 450-459 | 3.9 | 99 |
| 301 | Computer-aided design of ionic liquids as solvents for extractive desulfurization. <i>AIChE Journal</i> , 2018 , 64, 1013-1025 | 3.6 | 97 |
| 300 | Fault Detection of Nonlinear Processes Using Multiway Kernel Independent Component Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 7780-7787 | 3.9 | 97 |
| 299 | A two-stage iterative learning control technique combined with real-time feedback for independent disturbance rejection. <i>Automatica</i> , 2004 , 40, 1913-1922 | 5.7 | 97 |
| 298 | Systematic Method for Screening Ionic Liquids as Extraction Solvents Exemplified by an Extractive Desulfurization Process. <i>ACS Sustainable Chemistry and Engineering</i> , 2017 , 5, 3382-3389 | 8.3 | 92 |
| 297 | Fault detection of plasma etchers using optical emission spectra. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2000 , 13, 374-385 | 2.6 | 92 |
| 296 | Reconstruction based fault prognosis for continuous processes. <i>Control Engineering Practice</i> , 2010 , 18, 1211-1219 | 3.9 | 86 |

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| 295 | Multiblock Concurrent PLS for Decentralized Monitoring of Continuous Annealing Processes. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 6429-6437 | 8.9 | 84 |
| 294 | Improved nonlinear fault detection technique and statistical analysis. <i>AIChE Journal</i> , 2008 , 54, 3207-3220 | 9.6 | 82 |
| 293 | Multiscale Kernel Based Residual Convolutional Neural Network for Motor Fault Diagnosis Under Nonstationary Conditions. <i>IEEE Transactions on Industrial Informatics</i> , 2020 , 16, 3797-3806 | 11.9 | 82 |
| 292 | Self-Validating Inferential Sensors with Application to Air Emission Monitoring. <i>Industrial & Engineering Chemistry Research</i> , 1997 , 36, 1675-1685 | 3.9 | 80 |
| 291 | Closed-loop subspace identification using the parity space. <i>Automatica</i> , 2006 , 42, 315-320 | 5.7 | 80 |
| 290 | . <i>IEEE Transactions on Fuzzy Systems</i> , 1994 , 2, 74-81 | 8.3 | 79 |
| 289 | Quality relevant data-driven modeling and monitoring of multivariate dynamic processes: the dynamic T-PLS approach. <i>IEEE Transactions on Neural Networks</i> , 2011 , 22, 2262-71 | | 78 |
| 288 | Recent developments in multivariable controller performance monitoring. <i>Journal of Process Control</i> , 2007 , 17, 221-227 | 3.9 | 75 |
| 287 | Overview of Surrogate Modeling in Chemical Process Engineering. <i>Chemie-Ingenieur-Technik</i> , 2019 , 91, 228-239 | 0.8 | 75 |
| 286 | Application of economic MPC to the energy and demand minimization of a commercial building. <i>Journal of Process Control</i> , 2014 , 24, 1282-1291 | 3.9 | 73 |
| 285 | A unified geometric approach to process and sensor fault identification and reconstruction: the unidimensional fault case. <i>Computers and Chemical Engineering</i> , 1998 , 22, 927-943 | 4 | 72 |
| 284 | Toward Artificial Mitochondrion: Mimicking Oxidative Phosphorylation in Polymer and Hybrid Membranes. <i>Nano Letters</i> , 2017 , 17, 6816-6821 | 11.5 | 71 |
| 283 | Online monitoring of nonlinear multivariate industrial processes using filtering KICA/PCA. <i>Control Engineering Practice</i> , 2014 , 22, 205-216 | 3.9 | 71 |
| 282 | Statistical MIMO controller performance monitoring. Part I: Data-driven covariance benchmark. <i>Journal of Process Control</i> , 2008 , 18, 277-296 | 3.9 | 68 |
| 281 | Decentralized Fault Diagnosis of Continuous Annealing Processes Based on Multilevel PCA. <i>IEEE Transactions on Automation Science and Engineering</i> , 2013 , 10, 687-698 | 4.9 | 67 |
| 280 | Integrated solvent and process design exemplified for a Diels-Alder reaction. <i>AIChE Journal</i> , 2015 , 61, 147-158 | 3.6 | 66 |
| 279 | Dynamics of CO ₂ Absorption and Desorption Processes in Alkanolamine with Cosolvent Polyethylene Glycol. <i>Industrial & Engineering Chemistry Research</i> , 2012 , 51, 12081-12088 | 3.9 | 66 |
| 278 | Deactivation of Modified Iron Oxide Materials in the Cyclic Water Gas Shift Process for CO-Free Hydrogen Production. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 303-310 | 3.9 | 61 |

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| 277 | Data-driven root cause diagnosis of faults in process industries. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2016 , 159, 1-11 | 3.8 | 60 |
| 276 | A novel subspace identification approach with enforced causal models. <i>Automatica</i> , 2005 , 41, 2043-2053 | 5.7 | 60 |
| 275 | Optimal operational control for complex industrial processes. <i>Annual Reviews in Control</i> , 2014 , 38, 81-92 | 10.3 | 59 |
| 274 | CO ₂ methanation: Optimal start-up control of a fixed-bed reactor for power-to-gas applications. <i>AIChE Journal</i> , 2017 , 63, 23-31 | 3.6 | 59 |
| 273 | Predictive control methods to improve energy efficiency and reduce demand in buildings. <i>Computers and Chemical Engineering</i> , 2013 , 51, 77-85 | 4 | 58 |
| 272 | Concurrent quality and process monitoring with canonical correlation analysis. <i>Journal of Process Control</i> , 2017 , 60, 95-103 | 3.9 | 56 |
| 271 | Projection based MIMO control performance monitoring: Covariance monitoring in state space. <i>Journal of Process Control</i> , 2003 , 13, 739-757 | 3.9 | 55 |
| 270 | Nonlinear FIR modeling via a neural net PLS approach. <i>Computers and Chemical Engineering</i> , 1996 , 20, 147-159 | 4 | 55 |
| 269 | Statistical MIMO controller performance monitoring. Part II: Performance diagnosis. <i>Journal of Process Control</i> , 2008 , 18, 297-319 | 3.9 | 54 |
| 268 | Autoregressive Dynamic Latent Variable Models for Process Monitoring. <i>IEEE Transactions on Control Systems Technology</i> , 2017 , 25, 366-373 | 4.8 | 52 |
| 267 | On-line batch process monitoring using a consecutively updated multiway principal component analysis model. <i>Computers and Chemical Engineering</i> , 2003 , 27, 1903-1912 | 4 | 50 |
| 266 | Synthesis of Single-Crystal Gold Nano- and Microprisms Using a Solvent-Reductant-Template Ionic Liquid. <i>European Journal of Inorganic Chemistry</i> , 2008 , 2008, 3769-3775 | 2.3 | 48 |
| 265 | Sensor validation and process fault diagnosis for FCC units under MPC feedback. <i>Control Engineering Practice</i> , 2001 , 9, 877-888 | 3.9 | 48 |
| 264 | Simultaneous design of the optimal reaction and process concept for multiphase systems. <i>Chemical Engineering Science</i> , 2014 , 115, 69-87 | 4.4 | 47 |
| 263 | Performance monitoring of model-predictive controllers via model residual assessment. <i>Journal of Process Control</i> , 2013 , 23, 473-482 | 3.9 | 46 |
| 262 | Output Relevant Fault Reconstruction and Fault Subspace Extraction in Total Projection to Latent Structures Models. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 9175-9183 | 3.9 | 44 |
| 261 | Out-of-equilibrium microcompartments for the bottom-up integration of metabolic functions. <i>Nature Communications</i> , 2018 , 9, 2391 | 17.4 | 41 |
| 260 | Adaptive actuator fault compensation for linear systems with matching and unmatched uncertainties. <i>Journal of Process Control</i> , 2009 , 19, 985-990 | 3.9 | 41 |

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| 259 | On the stability of MIMO EWMA run-to-run controllers with metrology delay. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2006 , 19, 78-86 | 2.6 | 41 |
| 258 | Regression on dynamic PLS structures for supervised learning of dynamic data. <i>Journal of Process Control</i> , 2018 , 68, 64-72 | 3.9 | 41 |
| 257 | A hybrid stochastic-deterministic optimization approach for integrated solvent and process design. <i>Chemical Engineering Science</i> , 2017 , 159, 207-216 | 4.4 | 40 |
| 256 | Use of principal component analysis for sensor fault identification. <i>Computers and Chemical Engineering</i> , 1996 , 20, S713-S718 | 4 | 40 |
| 255 | Total projection to latent structures for process monitoring. <i>AICHE Journal</i> , 2009 , 56, NA-NA | 3.6 | 39 |
| 254 | Plasma etching endpoint detection using multiple wavelengths for small open-area wafers. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 66-75 | 2.9 | 39 |
| 253 | Optimal Solvent Design for Extractive Distillation Processes: A Multiobjective Optimization-Based Hierarchical Framework. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 5777-5786 | 3.9 | 38 |
| 252 | Discriminating between disturbance and process model mismatch in model predictive control. <i>Journal of Process Control</i> , 2009 , 19, 1610-1616 | 3.9 | 37 |
| 251 | Recursive least squares estimation for run-to-run control with metrology delay and its application to STI etch process. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2005 , 18, 309-319 | 2.6 | 37 |
| 250 | VLE and LLE Data for the System Cyclohexane + Cyclohexene + Water + Cyclohexanol. <i>Journal of Chemical & Engineering Data</i> , 2004 , 49, 1675-1681 | 2.8 | 37 |
| 249 | Dynamic concurrent kernel CCA for strip-thickness relevant fault diagnosis of continuous annealing processes. <i>Journal of Process Control</i> , 2018 , 67, 12-22 | 3.9 | 36 |
| 248 | Thermomorphic solvent selection for homogeneous catalyst recovery based on COSMO-RS. <i>Chemical Engineering and Processing: Process Intensification</i> , 2016 , 99, 97-106 | 3.7 | 36 |
| 247 | Fault Diagnosis in the Feedback-Invariant Subspace of Closed-Loop Systems. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 2359-2368 | 3.9 | 36 |
| 246 | Closed-loop subspace identification with innovation estimation. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2003 , 36, 861-866 | | 36 |
| 245 | Economic model predictive control for building energy systems 2011 , | | 33 |
| 244 | Adaptive actuator/component fault compensation for nonlinear systems. <i>AICHE Journal</i> , 2008 , 54, 2404-2412 | 3.6 | 33 |
| 243 | Dynamic latent variable analytics for process operations and control. <i>Computers and Chemical Engineering</i> , 2018 , 114, 69-80 | 4 | 33 |
| 242 | Continuous Crystallization in a Helically Coiled Flow Tube: Analysis of Flow Field, Residence Time Behavior, and Crystal Growth. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 3699-3712 | 3.9 | 32 |

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| 241 | Comparison of flocculation methods for harvesting <i>Dunaliella</i> . <i>Bioresource Technology</i> , 2015 , 196, 145-521 | 3.1 | 32 |
| 240 | Minimum variance performance map for constrained model predictive control. <i>Journal of Process Control</i> , 2009 , 19, 1199-1204 | 3.9 | 32 |
| 239 | Model-based Optimal Sabatier Reactor Design for Power-to-Gas Applications. <i>Energy Technology</i> , 2017 , 5, 911-921 | 3.5 | 31 |
| 238 | Prediction of acid dissociation constants of organic compounds using group contribution methods. <i>Chemical Engineering Science</i> , 2018 , 183, 95-105 | 4.4 | 31 |
| 237 | Fault Detection and Operation Mode Identification Based on Pattern Classification with Variable Selection. <i>Industrial & Engineering Chemistry Research</i> , 2004 , 43, 1701-1710 | 3.9 | 31 |
| 236 | Total PLS Based Contribution Plots for Fault Diagnosis. <i>Zidonghua Xuebao/Acta Automatica Sinica</i> , 2009 , 35, 759-765 | | 31 |
| 235 | Hydrogen and Carbon Monoxide Production by Chemical Looping over Iron-Aluminium Oxides. <i>Energy Technology</i> , 2016 , 4, 304-313 | 3.5 | 31 |
| 234 | Achieving state estimation equivalence for misassigned disturbances in offset-free model predictive control. <i>AIChE Journal</i> , 2009 , 55, 396-407 | 3.6 | 30 |
| 233 | Dynamic Behavior of a PEM Fuel Cell During Electrochemical CO Oxidation on a PtRu Anode. <i>Topics in Catalysis</i> , 2008 , 51, 89-97 | 2.3 | 30 |
| 232 | Steady-state analysis of the Anaerobic Digestion Model No. 1 (ADM1). <i>Nonlinear Dynamics</i> , 2013 , 73, 535-549 | 5 | 29 |
| 231 | Systematic Screening of Deep Eutectic Solvents as Sustainable Separation Media Exemplified by the CO ₂ Capture Process. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 8741-8751 | 8.3 | 29 |
| 230 | Extending the UNIFAC model for ionic liquid-solute systems by combining experimental and computational databases. <i>AIChE Journal</i> , 2020 , 66, e16821 | 3.6 | 29 |
| 229 | Comprehensive monitoring of nonlinear processes based on concurrent kernel projection to latent structures. <i>IEEE Transactions on Automation Science and Engineering</i> , 2016 , 13, 1129-1137 | 4.9 | 28 |
| 228 | Dynamic Nonlinear Partial Least Squares Modeling Using Gaussian Process Regression. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 16676-16686 | 3.9 | 28 |
| 227 | Data-driven Fault Detection and Diagnosis for Complex Industrial Processes. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2009 , 42, 1115-1125 | | 28 |
| 226 | Two-Step Reactive Distillation Process for Cyclohexanol Production from Cyclohexene. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 9534-9545 | 3.9 | 27 |
| 225 | Optimal design of solvents for extractive reaction processes. <i>AIChE Journal</i> , 2016 , 62, 3238-3249 | 3.6 | 27 |
| 224 | Probabilistic reactor design in the framework of elementary process functions. <i>Computers and Chemical Engineering</i> , 2016 , 94, 45-59 | 4 | 26 |

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| 223 | Dynamic-Inner Partial Least Squares for Dynamic Data Modeling. <i>IFAC-PapersOnLine</i> , 2015 , 48, 117-122 | 0.7 | 26 |
| 222 | Variance component analysis based fault diagnosis of multi-layer overlay lithography processes. <i>IIE Transactions</i> , 2009 , 41, 764-775 | | 26 |
| 221 | Fault diagnosis of continuous annealing processes using a reconstruction-based method. <i>Control Engineering Practice</i> , 2012 , 20, 511-518 | 3.9 | 25 |
| 220 | Computer simulation of gas generation and transport in landfills. V: Use of artificial neural network and the genetic algorithm for short- and long-term forecasting and planning. <i>Chemical Engineering Science</i> , 2011 , 66, 2646-2659 | 4.4 | 25 |
| 219 | Offline Predictive Control of Out-of-Plane Shape Deformation for Additive Manufacturing. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2016 , 138, | 3.3 | 25 |
| 218 | Thermodynamic analysis and optimization of RWGS processes for solar syngas production from CO ₂ . <i>AIChE Journal</i> , 2017 , 63, 15-22 | 3.6 | 24 |
| 217 | Measurement and simulation of mass transfer and backmixing behavior in a gas-liquid helically coiled tubular reactor. <i>Chemical Engineering Science</i> , 2017 , 170, 410-421 | 4.4 | 23 |
| 216 | Unevenly Sampled Dynamic Data Modeling and Monitoring With an Industrial Application. <i>IEEE Transactions on Industrial Informatics</i> , 2017 , 13, 2203-2213 | 11.9 | 23 |
| 215 | A strong tracking predictor for nonlinear processes with input time delay. <i>Computers and Chemical Engineering</i> , 2004 , 28, 2523-2540 | 4 | 23 |
| 214 | Sensor Fault Detection via Multiscale Analysis and Nonparametric Statistical Inference. <i>Industrial & Engineering Chemistry Research</i> , 1998 , 37, 1024-1032 | 3.9 | 23 |
| 213 | Constructing artificial respiratory chain in polymer compartments: Insights into the interplay between oxidase and the membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 15006-15017 | 11.5 | 22 |
| 212 | Comparative study on monitoring schemes for non-Gaussian distributed processes. <i>Journal of Process Control</i> , 2018 , 67, 69-82 | 3.9 | 22 |
| 211 | Valorization of the aqueous phase obtained from hydrothermally treated <i>Dunaliella salina</i> remnant biomass. <i>Bioresource Technology</i> , 2016 , 219, 64-71 | 11 | 22 |
| 210 | Rational design of double salt ionic liquids as extraction solvents: Separation of thiophene/n-octane as example. <i>AIChE Journal</i> , 2019 , 65, e16625 | 3.6 | 21 |
| 209 | Optimal industrial load control in smart grid: A case study for oil refineries 2013 , | | 21 |
| 208 | Integrated reaction-extraction process for the hydroformylation of long-chain alkenes with a homogeneous catalyst. <i>Computers and Chemical Engineering</i> , 2017 , 105, 212-223 | 4 | 20 |
| 207 | Bridging systems theory and data science: A unifying review of dynamic latent variable analytics and process monitoring. <i>Annual Reviews in Control</i> , 2020 , 50, 29-48 | 10.3 | 20 |
| 206 | Concurrent Canonical Correlation Analysis Modeling for Quality-Relevant Monitoring. <i>IFAC-PapersOnLine</i> , 2016 , 49, 1044-1049 | 0.7 | 20 |

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| 205 | Dynamic latent variable regression for inferential sensor modeling and monitoring. <i>Computers and Chemical Engineering</i> , 2020 , 137, 106809 | 4 | 19 |
| 204 | MIMO control performance monitoring using left/right diagonal interactors. <i>Journal of Process Control</i> , 2009 , 19, 1267-1276 | 3.9 | 19 |
| 203 | Adaptive generic model control for a class of nonlinear time-varying processes with input time delay. <i>Journal of Process Control</i> , 2004 , 14, 517-531 | 3.9 | 19 |
| 202 | Feasibility of an Electrochemical Membrane Reactor for the Partial Oxidation of n-Butane to Maleic Anhydride. <i>Industrial & Engineering Chemistry Research</i> , 2004 , 43, 4551-4558 | 3.9 | 19 |
| 201 | On-line data compression and error analysis using wavelet technology. <i>AIChE Journal</i> , 2000 , 46, 119-132 | 3.6 | 19 |
| 200 | Dynamic flux balance modeling to increase the production of high-value compounds in green microalgae. <i>Biotechnology for Biofuels</i> , 2016 , 9, 165 | 7.8 | 19 |
| 199 | Polymer-Based Module for NAD Regeneration with Visible Light. <i>ChemBioChem</i> , 2019 , 20, 2593-2596 | 3.8 | 18 |
| 198 | Ultra-low loading Pt-sputtered gas diffusion electrodes for oxygen reduction reaction. <i>Journal of Applied Electrochemistry</i> , 2018 , 48, 221-232 | 2.6 | 18 |
| 197 | Evaluation of Different Process Concepts for the Indirect Hydration of Cyclohexene to Cyclohexanol. <i>Organic Process Research and Development</i> , 2013 , 17, 343-358 | 3.9 | 18 |
| 196 | Nonlinear frequency response analysis for the diagnosis of carbon monoxide poisoning in PEM fuel cell anodes. <i>Journal of Applied Electrochemistry</i> , 2011 , 41, 1021-1032 | 2.6 | 18 |
| 195 | Electrochemical membrane reactors for sustainable chlorine recycling. <i>Membranes</i> , 2012 , 2, 510-28 | 3.8 | 18 |
| 194 | Projection based MIMO control performance monitoring: II measured disturbances and setpoint changes. <i>Journal of Process Control</i> , 2005 , 15, 89-102 | 3.9 | 18 |
| 193 | A dynamic growth model of <i>Dunaliella salina</i> : parameter identification and profile likelihood analysis. <i>Bioresour. Technol.</i> , 2014 , 173, 21-31 | 11 | 17 |
| 192 | Nonstationarity and cointegration tests for fault detection of dynamic processes. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014 , 47, 10616-10621 | | 17 |
| 191 | Nonlinear Frequency Response Analysis of the Ferrocyanide Oxidation Kinetics. Part II. Measurement Routine and Experimental Validation. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 17352-17358 | 3.8 | 17 |
| 190 | Reactor configurations for biogas plants: a model based analysis. <i>Chemical Engineering Science</i> , 2013 , 104, 413-426 | 4.4 | 16 |
| 189 | Optimal Reactor Design via Flux Profile Analysis for an Integrated Hydroformylation Process. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 11507-11518 | 3.9 | 16 |
| 188 | Decentralized Fault Diagnosis of Large-scale Processes Using Multiblock Kernel Principal Component Analysis. <i>Zidonghua Xuebao/Acta Automatica Sinica</i> , 2010 , 36, 593-597 | | 16 |

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| 187 | Diagnostic concept for dynamically operated biogas production plants. <i>Renewable Energy</i> , 2016 , 96, 4798-489 | | 16 |
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