

Christodoulos A Floudas

List of Publications by Year in descending order

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163
papers

10,677
citations

23567
58
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33894
99
g-index

168
all docs

168
docs citations

168
times ranked

5889
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Continuous-time versus discrete-time approaches for scheduling of chemical processes: a review. Computers and Chemical Engineering, 2004, 28, 2109-2129. | 3.8 | 555 |
| 2 | ANTIGONE: Algorithms for coNTinuous / Integer Global Optimization of Nonlinear Equations. Journal of Global Optimization, 2014, 59, 503-526. | 1.8 | 390 |
| 3 | Handbook of Test Problems in Local and Global Optimization. Nonconvex Optimization and Its Applications, 1999, , . | 0.1 | 379 |
| 4 | Deterministic Global Optimization. Nonconvex Optimization and Its Applications, 2000, , . | 0.1 | 363 |
| 5 | A new robust optimization approach for scheduling under uncertainty:. Computers and Chemical Engineering, 2004, 28, 1069-1085. | 3.8 | 317 |
| 6 | Mixed Integer Linear Programming in Process Scheduling: Modeling, Algorithms, and Applications. Annals of Operations Research, 2005, 139, 131-162. | 4.1 | 276 |
| 7 | A multi-scale framework for CO ₂ capture, utilization, and sequestration: CCUS and CCU. Computers and Chemical Engineering, 2015, 81, 2-21. | 3.8 | 226 |
| 8 | A Comparative Theoretical and Computational Study on Robust Counterpart Optimization: I. Robust Linear Optimization and Robust Mixed Integer Linear Optimization. Industrial & Engineering Chemistry Research, 2011, 50, 10567-10603. | 3.7 | 205 |
| 9 | A new robust optimization approach for scheduling under uncertainty. Computers and Chemical Engineering, 2007, 31, 171-195. | 3.8 | 197 |
| 10 | Finding all solutions of nonlinearly constrained systems of equations. Journal of Global Optimization, 1995, 7, 143-182. | 1.8 | 190 |
| 11 | Global optimization in generalized geometric programming. Computers and Chemical Engineering, 1997, 21, 351-369. | 3.8 | 185 |
| 12 | Planning and Scheduling under Uncertainty: A Review Across Multiple Sectors. Industrial & Engineering Chemistry Research, 2010, 49, 3993-4017. | 3.7 | 175 |
| 13 | Global Optimization for the Parameter Estimation of Differential-Algebraic Systems. Industrial & Engineering Chemistry Research, 2000, 39, 1291-1310. | 3.7 | 169 |
| 14 | GloMIQO: Global mixed-integer quadratic optimizer. Journal of Global Optimization, 2013, 57, 3-50. | 1.8 | 162 |
| 15 | Modeling, Simulation, and Optimization of Postcombustion CO ₂ Capture for Variable Feed Concentration and Flow Rate. 2. Pressure Swing Adsorption and Vacuum Swing Adsorption Processes. Industrial & Engineering Chemistry Research, 2012, 51, 15665-15682. | 3.7 | 161 |
| 16 | Global optimization advances in Mixed-Integer Nonlinear Programming, MINLP, and Constrained Derivative-Free Optimization, CDFO. European Journal of Operational Research, 2016, 252, 701-727. | 5.7 | 161 |
| 17 | Analysis and design of metabolic reaction networks via mixed-integer linear optimization. AIChE Journal, 1996, 42, 1277-1292. | 3.6 | 160 |
| 18 | Global optimization for the phase stability problem. AIChE Journal, 1995, 41, 1798-1814. | 3.6 | 154 |

| # | ARTICLE | IF | CITATIONS |
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| 19 | GLOPEQ: A new computational tool for the phase and chemical equilibrium problem. Computers and Chemical Engineering, 1997, 21, 1-23. | 3.8 | 154 |
| 20 | Rigorous convex underestimators for general twice-differentiable problems. Journal of Global Optimization, 1996, 9, 23-40. | 1.8 | 143 |
| 21 | Enhanced Continuous-Time Unit-Specific Event-Based Formulation for Short-Term Scheduling of Multipurpose Batch Processes: A Resource Constraints and Mixed Storage Policies. Industrial & Engineering Chemistry Research, 2004, 43, 2516-2533. | 3.7 | 143 |
| 22 | The Robust Capacitated Vehicle Routing Problem Under Demand Uncertainty. Operations Research, 2013, 61, 677-693. | 1.9 | 142 |
| 23 | Global Optimization in Design under Uncertainty: A Feasibility Test and Flexibility Index Problems. Industrial & Engineering Chemistry Research, 2001, 40, 4267-4282. | 3.7 | 136 |
| 24 | Production of benzene, toluene, and xylenes from natural gas via methanol: Process synthesis and global optimization. AIChE Journal, 2016, 62, 1531-1556. | 3.6 | 136 |
| 25 | Deterministic Global Optimization in Nonlinear Optimal Control Problems. Journal of Global Optimization, 2000, 17, 97-126. | 1.8 | 133 |
| 26 | Toward Novel Hybrid Biomass, Coal, and Natural Gas Processes for Satisfying Current Transportation Fuel Demands, 1: Process Alternatives, Gasification Modeling, Process Simulation, and Economic Analysis. Industrial & Engineering Chemistry Research, 2010, 49, 7343-7370. | 3.7 | 129 |
| 27 | A global optimization approach for Lennard-Jones microclusters. Journal of Chemical Physics, 1992, 97, 7667-7678. | 3.0 | 128 |
| 28 | Protein folding and de novo protein design for biotechnological applications. Trends in Biotechnology, 2014, 32, 99-109. | 9.3 | 127 |
| 29 | Global Optimization of Nonlinear Bilevel Programming Problems. Journal of Global Optimization, 2001, 20, 1-31. | 1.8 | 125 |
| 30 | Global Optimization of Large-Scale Generalized Pooling Problems: Quadratically Constrained MINLP Models. Industrial & Engineering Chemistry Research, 2010, 49, 5424-5438. | 3.7 | 122 |
| 31 | Global optimization of a combinatorially complex generalized pooling problem. AIChE Journal, 2006, 52, 1027-1037. | 3.6 | 121 |
| 32 | Production Scheduling of a Large-Scale Industrial Batch Plant. II. Reactive Scheduling. Industrial & Engineering Chemistry Research, 2006, 45, 8253-8269. | 3.7 | 118 |
| 33 | Continuous-Time Models for Short-Term Scheduling of Multipurpose Batch Plants: A Comparative Study. Industrial & Engineering Chemistry Research, 2006, 45, 6190-6209. | 3.7 | 102 |
| 34 | APOGEE: Global optimization of standard, generalized, and extended pooling problems via linear and logarithmic partitioning schemes. Computers and Chemical Engineering, 2011, 35, 876-892. | 3.8 | 101 |
| 35 | ARGONAUT: Algorithms for Global Optimization of constrained grey-box computational problems. Optimization Letters, 2017, 11, 895-913. | 1.6 | 97 |
| 36 | A deterministic global optimization approach for molecular structure determination. Journal of Chemical Physics, 1994, 100, 1247-1261. | 3.0 | 95 |

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| 37 | Continuous-Time Optimization Approach for Medium-Range Production Scheduling of a Multiproduct Batch Plant. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 3884-3906. | 3.7 | 92 |
| 38 | Toward Novel Hybrid Biomass, Coal, and Natural Gas Processes for Satisfying Current Transportation Fuel Demands, 2: Simultaneous Heat and Power Integration. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 7371-7388. | 3.7 | 91 |
| 39 | Biomass-Based Production of Benzene, Toluene, and Xylenes via Methanol: Process Synthesis and Deterministic Global Optimization. <i>Energy & Fuels</i> , 2016, 30, 4970-4998. | 5.1 | 91 |
| 40 | Global Optimization in Parameter Estimation of Nonlinear Algebraic Models via the Error-in-Variables Approach. <i>Industrial & Engineering Chemistry Research</i> , 1998, 37, 1841-1858. | 3.7 | 90 |
| 41 | Unit-specific event-based continuous-time approach for short-term scheduling of batch plants using RTN framework. <i>Computers and Chemical Engineering</i> , 2008, 32, 260-274. | 3.8 | 85 |
| 42 | Discovery of novel zeolites for natural gas purification through combined material screening and process optimization. <i>AIChE Journal</i> , 2014, 60, 1767-1785. | 3.6 | 85 |
| 43 | Trilinear Monomials with Mixed Sign Domains: Facets of the Convex and Concave Envelopes. <i>Journal of Global Optimization</i> , 2004, 29, 125-155. | 1.8 | 84 |
| 44 | Production Scheduling of a Large-Scale Industrial Batch Plant. I. Short-Term and Medium-Term Scheduling. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 8234-8252. | 3.7 | 84 |
| 45 | Novel Unified Modeling Approach for Short-Term Scheduling. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 2947-2964. | 3.7 | 82 |
| 46 | Global optimization of general constrained grey-box models: new method and its application to constrained PDEs for pressure swing adsorption. <i>Journal of Global Optimization</i> , 2017, 67, 3-42. | 1.8 | 82 |
| 47 | Global optimization of mixed-integer quadratically-constrained quadratic programs (MIQCQP) through piecewise-linear and edge-concave relaxations. <i>Mathematical Programming</i> , 2012, 136, 155-182. | 2.4 | 81 |
| 48 | Multi-scale systems engineering for energy and the environment: Challenges and opportunities. <i>AIChE Journal</i> , 2016, 62, 602-623. | 3.6 | 78 |
| 49 | Optimization of regulatory architectures in metabolic reaction networks. , 1996, 52, 485-500. | | 77 |
| 50 | A Comparative Theoretical and Computational Study on Robust Counterpart Optimization: II. Probabilistic Guarantees on Constraint Satisfaction. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 6769-6788. | 3.7 | 74 |
| 51 | Convex envelopes for edge-concave functions. <i>Mathematical Programming</i> , 2005, 103, 207-224. | 2.4 | 73 |
| 52 | Continuous-time modeling and global optimization approach for scheduling of crude oil operations. <i>AIChE Journal</i> , 2012, 58, 205-226. | 3.6 | 73 |
| 53 | Big data approach to batch process monitoring: Simultaneous fault detection and diagnosis using nonlinear support vector machine-based feature selection. <i>Computers and Chemical Engineering</i> , 2018, 115, 46-63. | 3.8 | 73 |
| 54 | Improving unit-specific event based continuous-time approaches for batch processes: Integrality gap and task splitting. <i>Computers and Chemical Engineering</i> , 2008, 32, 913-955. | 3.8 | 72 |

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|----|--|-----|-----------|
| 55 | Discovery of functionally selective C5aR2 ligands: novel modulators of C5a signalling. Immunology and Cell Biology, 2016, 94, 787-795. | 2.3 | 68 |
| 56 | Improved Unit-Specific Event-Based Continuous-Time Model for Short-Term Scheduling of Continuous Processes: A Rigorous Treatment of Storage Requirements. Industrial & Engineering Chemistry Research, 2007, 46, 1764-1779. | 3.7 | 66 |
| 57 | Novel Natural Gas to Liquids Processes: Process Synthesis and Global Optimization Strategies. AIChE Journal, 2013, 59, 505-531. | 3.6 | 65 |
| 58 | Global optimization of grey-box computational systems using surrogate functions and application to highly constrained oil-field operations. Computers and Chemical Engineering, 2018, 114, 99-110. | 3.8 | 65 |
| 59 | Optimal scenario reduction framework based on distance of uncertainty distribution and output performance: I. Single reduction via mixed integer linear optimization. Computers and Chemical Engineering, 2014, 70, 50-66. | 3.8 | 60 |
| 60 | Optimal design of energy systems using constrained grey-box multi-objective optimization. Computers and Chemical Engineering, 2018, 116, 488-502. | 3.8 | 60 |
| 61 | Municipal solid waste to liquid transportation fuels “ Part I: Mathematical modeling of a municipal solid waste gasifier. Computers and Chemical Engineering, 2014, 71, 636-647. | 3.8 | 58 |
| 62 | A New Class of Improved Convex Underestimators for Twice Continuously Differentiable Constrained NLPs. Journal of Global Optimization, 2004, 30, 367-390. | 1.8 | 57 |
| 63 | Molecular Recognition of CCR5 by an HIV-1 gp120 V3 Loop. PLoS ONE, 2014, 9, e95767. | 2.5 | 56 |
| 64 | A Decomposition Strategy for Global Optimum Search in the Pooling Problem. ORSA Journal on Computing, 1990, 2, 225-235. | 1.7 | 52 |
| 65 | Production scheduling of a large-scale industrial continuous plant: Short-term and medium-term scheduling. Computers and Chemical Engineering, 2009, 33, 670-686. | 3.8 | 52 |
| 66 | Computational Experience with a New Class of Convex Underestimators: Box-constrained NLP Problems. Journal of Global Optimization, 2004, 29, 249-264. | 1.8 | 51 |
| 67 | Nationwide energy supply chain analysis for hybrid feedstock processes with significant CO ₂ emissions reduction. AIChE Journal, 2012, 58, 2142-2154. | 3.6 | 51 |
| 68 | Robust optimization and stochastic programming approaches for medium-term production scheduling of a large-scale steelmaking continuous casting process under demand uncertainty. Computers and Chemical Engineering, 2014, 66, 165-185. | 3.8 | 51 |
| 69 | Data-driven mathematical modeling and global optimization framework for entire petrochemical planning operations. AIChE Journal, 2016, 62, 3020-3040. | 3.6 | 51 |
| 70 | Operational Planning of Large-Scale Industrial Batch Plants under Demand Due Date and Amount Uncertainty. I. Robust Optimization Framework. Industrial & Engineering Chemistry Research, 2009, 48, 7214-7231. | 3.7 | 50 |
| 71 | Global Optimization of Gas Lifting Operations: A Comparative Study of Piecewise Linear Formulations. Industrial & Engineering Chemistry Research, 2009, 48, 6098-6104. | 3.7 | 48 |
| 72 | Production Scheduling of a Large-Scale Steelmaking Continuous Casting Process via Unit-Specific Event-Based Continuous-Time Models: Short-Term and Medium-Term Scheduling. Industrial & Engineering Chemistry Research, 2012, 51, 7300-7319. | 3.7 | 48 |

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|----|--|-----|-----------|
| 73 | An Adaptive Memory Programming Framework for the Robust Capacitated Vehicle Routing Problem. Transportation Science, 2016, 50, 1239-1260. | 4.4 | 48 |
| 74 | Integrated Operational Planning and Medium-Term Scheduling for Large-Scale Industrial Batch Plants. Industrial & Engineering Chemistry Research, 2008, 47, 4845-4860. | 3.7 | 47 |
| 75 | Operational planning framework for multisite production and distribution networks. Computers and Chemical Engineering, 2009, 33, 1036-1050. | 3.8 | 45 |
| 76 | Operational Planning of Large-Scale Industrial Batch Plants under Demand Due Date and Amount Uncertainty: II. Conditional Value-at-Risk Framework. Industrial & Engineering Chemistry Research, 2010, 49, 260-275. | 3.7 | 41 |
| 77 | A Comparative Theoretical and Computational Study on Robust Counterpart Optimization: III. Improving the Quality of Robust Solutions. Industrial & Engineering Chemistry Research, 2014, 53, 13112-13124. | 3.7 | 41 |
| 78 | Optimal Event Point Determination for Short-Term Scheduling of Multipurpose Batch Plants via Unit-Specific Event-Based Continuous-Time Approaches. Industrial & Engineering Chemistry Research, 2010, 49, 7446-7469. | 3.7 | 40 |
| 79 | Scheduling of crude oil operations under demand uncertainty: A robust optimization framework coupled with global optimization. AIChE Journal, 2012, 58, 2373-2396. | 3.6 | 40 |
| 80 | Research challenges, opportunities and synergism in systems engineering and computational biology. AIChE Journal, 2005, 51, 1872-1884. | 3.6 | 39 |
| 81 | Elucidating a Key Anti-HIV-1 and Cancer-Associated Axis: The Structure of CCL5 (Rantes) in Complex with CCR5. Scientific Reports, 2014, 4, 5447. | 3.3 | 38 |
| 82 | A novel clustering approach and prediction of optimal number of clusters: global optimum search with enhanced positioning. Journal of Global Optimization, 2007, 39, 323-346. | 1.8 | 37 |
| 83 | Dynamically generated cutting planes for mixed-integer quadratically constrained quadratic programs and their incorporation into GloMIQO 2. Optimization Methods and Software, 2015, 30, 215-249. | 2.4 | 36 |
| 84 | New a priori and a posteriori probabilistic bounds for robust counterpart optimization: I. Unknown probability distributions. Computers and Chemical Engineering, 2016, 84, 568-598. | 3.8 | 36 |
| 85 | Global optimization for molecular conformation problems. Annals of Operations Research, 1993, 42, 85-117. | 4.1 | 35 |
| 86 | Tight convex underestimators for \mathcal{C}^2 -continuous problems: II. multivariate functions. Journal of Global Optimization, 2008, 42, 69-89. | 1.8 | 35 |
| 87 | De Novo Design and Experimental Characterization of Ultrashort Self-Associating Peptides. PLoS Computational Biology, 2014, 10, e1003718. | 3.2 | 35 |
| 88 | Convex Underestimation of Twice Continuously Differentiable Functions by Piecewise Quadratic Perturbation: Spline Underestimators. Journal of Global Optimization, 2005, 32, 221-258. | 1.8 | 34 |
| 89 | Coproduction of liquid transportation fuels and C_6 - C_8 aromatics from biomass and natural gas. AIChE Journal, 2015, 61, 831-856. | 3.6 | 32 |
| 90 | An Analysis of Some Unit-Specific Event-Based Models for the Short-Term Scheduling of Noncontinuous Processes. Industrial & Engineering Chemistry Research, 2010, 49, 633-647. | 3.7 | 31 |

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| 91 | Nationwide, Regional, and Statewide Energy Supply Chain Optimization for Natural Gas to Liquid Transportation Fuel (GTL) Systems. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 5366-5397. | 3.7 | 31 |
| 92 | Dimensionality reduction for production optimization using polynomial approximations. <i>Computational Geosciences</i> , 2017, 21, 247-266. | 2.4 | 31 |
| 93 | Biomass to Liquid Transportation Fuels via Biological and Thermochemical Conversion: Process Synthesis and Global Optimization Strategies. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 3203-3225. | 3.7 | 29 |
| 94 | A Novel Continuous-Time Modeling and Optimization Framework for Well Platform Planning Problems. <i>Optimization and Engineering</i> , 2003, 4, 65-95. | 2.4 | 28 |
| 95 | Scheduling of Tanker Lightering via a Novel Continuous-Time Optimization Framework. <i>Industrial & Engineering Chemistry Research</i> , 2003, 42, 4441-4451. | 3.7 | 28 |
| 96 | Multisite Planning under Demand and Transportation Time Uncertainty: Robust Optimization and Conditional Value-at-Risk Frameworks. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 4959-4982. | 3.7 | 27 |
| 97 | Global Optimization with Nonfactorable Constraints. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 6413-6424. | 3.7 | 26 |
| 98 | Discovery of novel zeolites and multi-zeolite processes for p-xylene separation using simulated moving bed (SMB) chromatography. <i>Chemical Engineering Science</i> , 2017, 159, 3-17. | 3.8 | 26 |
| 99 | Tight convex underestimators for C^2 -continuous problems: I. univariate functions. <i>Journal of Global Optimization</i> , 2008, 42, 51-67. | 1.8 | 23 |
| 100 | Highly Accurate Structure-Based Prediction of HIV-1 Coreceptor Usage Suggests Intermolecular Interactions Driving Tropism. <i>PLoS ONE</i> , 2016, 11, e0148974. | 2.5 | 23 |
| 101 | Locating All Heterogeneous and Reactive Azeotropes in Multicomponent Mixtures. <i>Industrial & Engineering Chemistry Research</i> , 2000, 39, 1576-1595. | 3.7 | 22 |
| 102 | Municipal solid waste to liquid transportation fuels, olefins, and aromatics: Process synthesis and deterministic global optimization. <i>Computers and Chemical Engineering</i> , 2017, 102, 169-187. | 3.8 | 22 |
| 103 | Optimization of black-box problems using Smolyak grids and polynomial approximations. <i>Journal of Global Optimization</i> , 2018, 71, 845-869. | 1.8 | 22 |
| 104 | Integration of Operational Planning and Medium-Term Scheduling for Large-Scale Industrial Batch Plants under Demand and Processing Time Uncertainty. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 4948-4965. | 3.7 | 21 |
| 105 | De Novo Peptide Design and Experimental Validation of Histone Methyltransferase Inhibitors. <i>PLoS ONE</i> , 2014, 9, e90095. | 2.5 | 21 |
| 106 | A Framework for Globally Optimizing Mixed-Integer Signomial Programs. <i>Journal of Optimization Theory and Applications</i> , 2014, 161, 905-932. | 1.5 | 21 |
| 107 | A framework to predict the price of energy for the end-users with applications to monetary and energy policies. <i>Nature Communications</i> , 2021, 12, 18. | 12.8 | 21 |
| 108 | COMSAT: Residue contact prediction of transmembrane proteins based on support vector machines and mixed integer linear programming. <i>Proteins: Structure, Function and Bioinformatics</i> , 2016, 84, 332-348. | 2.6 | 20 |

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| 109 | Convex underestimation for posynomial functions of positive variables. Optimization Letters, 2008, 2, 333-340. | 1.6 | 18 |
| 110 | Convex relaxation for solving posynomial programs. Journal of Global Optimization, 2010, 46, 147-154. | 1.8 | 18 |
| 111 | Integrated gasoline blending and order delivery operations: Part I. short-term scheduling and global optimization for single and multi-period operations. AIChE Journal, 2016, 62, 2043-2070. | 3.6 | 18 |
| 112 | New a priori and a posteriori probabilistic bounds for robust counterpart optimization: II. A priori bounds for known symmetric and asymmetric probability distributions. Computers and Chemical Engineering, 2017, 101, 279-311. | 3.8 | 17 |
| 113 | Derivation of ligands for the complement C3a receptor from the C-terminus of C5a. European Journal of Pharmacology, 2014, 745, 176-181. | 3.5 | 16 |
| 114 | Global Solution Approach for a Nonconvex MINLP Problem in Product Portfolio Optimization. Journal of Global Optimization, 2005, 32, 417-431. | 1.8 | 14 |
| 115 | Balancing mixed-model assembly lines with sequence-dependent tasks via hybrid genetic algorithm. Journal of Global Optimization, 2016, 65, 83-107. | 1.8 | 14 |
| 116 | Princeton_<scp>TIGRESS</scp> 2.0: High refinement consistency and net gains through support vector machines and molecular dynamics in double-blind predictions during the <scp>CASP</scp>11 experiment. Proteins: Structure, Function and Bioinformatics, 2017, 85, 1078-1098. | 2.6 | 14 |
| 117 | Robust stability analysis of systems with real parametric uncertainty: A global optimization approach. International Journal of Robust and Nonlinear Control, 1995, 5, 699-717. | 3.7 | 13 |
| 118 | Search Engines for Shape Selectivity. Catalysis Letters, 2009, 133, 234-241. | 2.6 | 13 |
| 119 | Optimization model for generic rank determination of structural matrices. International Journal of Control, 1989, 49, 1633-1644. | 1.9 | 12 |
| 120 | Methane Conversion to Ethylene and Acetylene: Optimal Control with Chlorine, Oxygen, and Heat Flux. Industrial & Engineering Chemistry Research, 1996, 35, 683-696. | 3.7 | 12 |
| 121 | On the functional form of convex underestimators for twice continuously differentiable functions. Optimization Letters, 2007, 1, 187-192. | 1.6 | 12 |
| 122 | A network flow model for biclustering via optimal re-ordering of data matrices. Journal of Global Optimization, 2010, 47, 343-354. | 1.8 | 12 |
| 123 | An integrated data-driven modeling & global optimization approach for multi-period nonlinear production planning problems. Computers and Chemical Engineering, 2020, 141, 107007. | 3.8 | 12 |
| 124 | Multi-level energy integration between units, plants and sites for natural gas industrial parks. Renewable and Sustainable Energy Reviews, 2018, 88, 1-15. | 16.4 | 11 |
| 125 | Municipal solid waste to liquid transportation fuels – Part III: An optimization-based nationwide supply chain management framework. Computers and Chemical Engineering, 2018, 116, 468-487. | 3.8 | 11 |
| 126 | Selecting the Optimal Target Company Based on Synergy Calculation for the Vertical Merger in a Petrochemical Complex. Industrial & Engineering Chemistry Research, 2009, 48, 1511-1521. | 3.7 | 10 |

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| 127 | Generation of networks with prescribed degree-dependent clustering. Optimization Letters, 2011, 5, 435-451. | 1.6 | 10 |
| 128 | New a priori and a posteriori probabilistic bounds for robust counterpart optimization: III. Exact and near-exact a posteriori expressions for known probability distributions. Computers and Chemical Engineering, 2017, 103, 116-143. | 3.8 | 10 |
| 129 | Generalized robust counterparts for constraints with bounded and unbounded uncertain parameters. Computers and Chemical Engineering, 2018, 116, 451-467. | 3.8 | 9 |
| 130 | Synergy in Mergers of Petrochemical Companies within a Complex Considering Purchasing and Selling Advantage with Process Integration. Industrial & Engineering Chemistry Research, 2008, 47, 5556-5567. | 3.7 | 8 |
| 131 | Operational strategy and planning for raw natural gas refining complexes: Process modeling and global optimization. AIChE Journal, 2017, 63, 652-668. | 3.6 | 8 |
| 132 | Natural Gas to Liquid Transportation Fuels under Uncertainty Using Robust Optimization. Industrial & Engineering Chemistry Research, 2018, 57, 11112-11129. | 3.7 | 8 |
| 133 | A decomposition approach for global optimum search in QP, NLP and MINLP problems. Annals of Operations Research, 1990, 25, 119-145. | 4.1 | 7 |
| 134 | Deterministic Global Optimization and Ab Initio Approaches for the Structure Prediction of Polypeptides, Dynamics of Protein Folding, and Protein-Protein Interactions. Advances in Chemical Physics, 2002, , 265-457. | 0.3 | 7 |
| 135 | Advances in robust optimization approaches for scheduling under uncertainty. Computer Aided Chemical Engineering, 2005, , 1051-1056. | 0.5 | 7 |
| 136 | Optimization framework for process scheduling of operation-dependent automobile assembly lines. Optimization Letters, 2012, 6, 797-824. | 1.6 | 7 |
| 137 | Structural properties of large scale systems. International Journal of Control, 1990, 51, 169-187. | 1.9 | 6 |
| 138 | Production of Benzene, Toluene, and the Xylenes from Natural Gas via Methanol. Computer Aided Chemical Engineering, 2016, 38, 2349-2354. | 0.5 | 6 |
| 139 | Rational design of shape selective separations and catalysis: Lattice relaxation and effective aperture size. AIChE Journal, 2010, 56, 611-632. | 3.6 | 5 |
| 140 | Operational Planning of Large-Scale Continuous Processes: Deterministic Planning Model and Robust Optimization for Demand Amount and Due Date Uncertainty. Industrial & Engineering Chemistry Research, 2012, 51, 4347-4362. | 3.7 | 5 |
| 141 | Estimation of diffusion anisotropy in microporous crystalline materials and optimization of crystal orientation in membranes. Journal of Chemical Physics, 2013, 139, 124703. | 3.0 | 5 |
| 142 | Performance of convex underestimators in a branch-and-bound framework. Optimization Letters, 2016, 10, 283-308. | 1.6 | 5 |
| 143 | Rebuttal to Comments on “Global Optimization for the Parameter Estimation of Differential-Algebraic Systems”. Industrial & Engineering Chemistry Research, 2001, 40, 490-491. | 3.7 | 4 |
| 144 | Mathematical modeling and efficient optimization methods for the distance-dependent rearrangement clustering problem. Journal of Global Optimization, 2009, 45, 111. | 1.8 | 4 |

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| 145 | Designing networks: A mixed-integer linear optimization approach. <i>Networks</i> , 2016, 68, 283-301. | 2.7 | 4 |
| 146 | Optimization of polymer synthesis through distributed control of polymerization conditions. <i>Journal of Applied Polymer Science</i> , 2002, 85, 2922-2928. | 2.6 | 3 |
| 147 | Data-driven modeling and global optimization of industrial-scale petrochemical planning operations. , 2016, , . | | 3 |
| 148 | Comments on "New General Continuous-Time State-Task Network Formulation for Short-Term Scheduling of Multipurpose Batch Plants" by Christos T. Maravelias and Ignacio E. Grossmann and on "Enhanced Continuous-Time Unit-Specific Event-Based Formulation for Short-Term Scheduling of Multipurpose Batch Processes: Resource Constraints and Mixed Storage Policies" by Stacy L. Janak, Xiaoxia Lin, and Christodoulos A. Floudas. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 1985-1986. | 3.7 | 2 |
| 149 | Alpha-helical topology and tertiary structure prediction in globular proteins. , 2007, , . | | 2 |
| 150 | An Efficient Unit-Specific Event-Based Continuous-Time MILP Formulation for Short-Term Scheduling of Multistage and Multiproduct Batch Plants. <i>Computer Aided Chemical Engineering</i> , 2012, 30, 772-776. | 0.5 | 2 |
| 151 | Slot-based vs. global event-based vs. unit-specific event-based models in scheduling of batch plants. <i>Computer Aided Chemical Engineering</i> , 2006, 21, 1923-1928. | 0.5 | 1 |
| 152 | Production scheduling of a large-scale industrial continuous plant: Short-term and medium-term scheduling. <i>Computer Aided Chemical Engineering</i> , 2007, , 613-618. | 0.5 | 1 |
| 153 | OPTIMAL METHODS FOR RE-ORDERING DATA MATRICES IN SYSTEMS BIOLOGY AND DRUG DISCOVERY APPLICATIONS. <i>Biophysical Reviews and Letters</i> , 2008, 03, 19-42. | 0.8 | 1 |
| 154 | Enhancing molecular discovery using descriptor-free rearrangement clustering techniques for sparse data sets. <i>AIChE Journal</i> , 2010, 56, 405-418. | 3.6 | 1 |
| 155 | Medium-Term Production Scheduling of a Large-Scale Steelmaking Continuous Casting Process under Demand Uncertainty. <i>Computer Aided Chemical Engineering</i> , 2013, 32, 571-576. | 0.5 | 1 |
| 156 | OPTIMAL METHODS FOR RE-ORDERING DATA MATRICES IN SYSTEMS BIOLOGY AND DRUG DISCOVERY APPLICATIONS. , 2008, , . | | 1 |
| 157 | Optimization of Living Radical Polymerization Through Distributed Control of Energy. <i>Macromolecular Chemistry and Physics</i> , 2001, 202, 2797-2801. | 2.2 | 0 |
| 158 | Comments on: Optimization and data mining in Biomedicine. <i>Top</i> , 2009, 17, 237-238. | 1.6 | 0 |
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