Richard D Braatz

List of Publications by Year in Descending Order

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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.

434 papers	15,326 citations	64 h-index	110 g-index
499 ext. papers	18,282 ext. citations	4.3 avg, IF	6.97 L-index

#	Paper	IF	Citations
434	A Polynomial Chaos Approach to Robust H_infinity Static Output-Feedback Control with Bounded Truncation Error. *IEEE Transactions on Automatic Control*, **2022**, 1-1	5.9	0
433	Compact neural network modeling of nonlinear dynamical systems via the standard nonlinear operator form. *Computers and Chemical Engineering*, **2022**, 159, 107674	4	0
432	Fast charging design for Lithium-ion batteries via Bayesian optimization. *Applied Energy*, **2022**, 307, 118244	11.7	3
431	Method of Characteristics for the Efficient Simulation of Population Balance Models. *Springer Optimization and Its Applications*, **2022**, 33-51	0.4	
430	Efficient Numerical Schemes for Population Balance Models. *Computers and Chemical Engineering*, **2022**, 107808	4	0
429	Fast Model Predictive Control of Modular Systems for Continuous Manufacturing of Pharmaceuticals. *Springer Optimization and Its Applications*, **2022**, 289-322	0.4	
428	Droplet-Based Evaporative System for the Estimation of Protein Crystallization Kinetics. *Crystal Growth and Design*, **2021**, 21, 6064-6075	3.5	
427	Bayesian learning for rapid prediction of lithium-ion battery-cycling protocols. *Joule*, **2021**,	27.8	5
426	Perspective□ombining Physics and Machine Learning to Predict Battery Lifetime. *Journal of the Electrochemical Society*, **2021**, 168, 030525	3.9	39
425	Fictitious phase separation in Li layered oxides driven by electro-autocatalysis. *Nature Materials*, **2021**, 20, 991-999	27	27
424	Analytical methods for process and product characterization of recombinant adeno-associated virus-based gene therapies. *Molecular Therapy - Methods and Clinical Development*, **2021**, 20, 740-754	6.4	17
423	Mechanistic modeling and parameter-adaptive nonlinear model predictive control of a microbioreactor. *Computers and Chemical Engineering*, **2021**, 147, 107255	4	2
422	Leveraging Neural Networks and Genetic Algorithms to Refine Electrode Properties in Redox Flow Batteries. *Journal of the Electrochemical Society*, **2021**, 168, 050547	3.9	0
421	Mathematical modeling and experimental validation of continuous slug-flow tubular crystallization with ultrasonication-induced nucleation and spatially varying temperature. *Chemical Engineering Research and Design*, **2021**, 169, 275-287	5.5	4
420	Output Feedback Control and Observer Design for Dynamic Artificial Neural Networks **2021**,		1
419	Stability Certificates for Neural Network Learning-based Controllers using Robust Control Theory **2021**,		3
418	Mechanistic model for production of recombinant adeno-associated virus via triple transfection of HEK293 cells. *Molecular Therapy - Methods and Clinical Development*, **2021**, 21, 642-655	6.4	7

417	Model-based control for column-based continuous viral inactivation of biopharmaceuticals. *Biotechnology and Bioengineering*, **2021**, 118, 3215-3224	4.9	1
416	Meeting the challenge of water sustainability: The role of process systems engineering. *AICHE Journal*, **2021**, 67, e17113	3.6	1
415	Macroscopic modeling of bioreactors for recombinant protein producing Pichia pastoris in defined medium. *Biotechnology and Bioengineering*, **2021**, 118, 1199-1212	4.9	5
414	Smart process analytics for predictive modeling. *Computers and Chemical Engineering*, **2021**, 144, 107134	4	10
413	A Reduced-order Model for Real-time NMPC of Ethanol Steam Reformers. *IFAC-PapersOnLine*, **2021**, 54, 103-108	0.7	
412	Robust Control Theory Based Stability Certificates for Neural Network Approximated Nonlinear Model Predictive Control. *IFAC-PapersOnLine*, **2021**, 54, 347-352	0.7	
411	Modeling of copy number variability in Pichia pastoris. *Biotechnology and Bioengineering*, **2021**, 118, 1832-1839	4.9	
410	Crystallization of a nonreplicating rotavirus vaccine candidate. *Biotechnology and Bioengineering*, **2021**, 118, 1750-1756	4.9	2
409	Image inversion and uncertainty quantification for constitutive laws of pattern formation. *Journal of Computational Physics*, **2021**, 436, 110279	4.1	2
408	Cellular pathways of recombinant adeno-associated virus production for gene therapy. *Biotechnology Advances*, **2021**, 49, 107764	17.8	5
407	MethodsPETLION: Open-Source Software for Millisecond-Scale Porous Electrode Theory-Based Lithium-Ion Battery Simulations. *Journal of the Electrochemical Society*, **2021**, 168, 090504	3.9	0
406	Nonlinear Identifiability Analysis of the Porous Electrode Theory Model of Lithium-Ion Batteries. *Journal of the Electrochemical Society*, **2021**, 168, 090546	3.9	2
405	Measuring the reversible heat of lithium-ion cells via current pulses for modeling of temperature dynamics. *Journal of Power Sources*, **2021**, 506, 230110	8.9	1
404	Polynomial chaos-based H2 output-feedback control of systems with probabilistic parametric uncertainties. *Automatica*, **2021**, 131, 109743	5.7	0
403	Multi-scale fluid dynamics simulation based on MP-PIC-PBE method for PMMA suspension polymerization. *Computers and Chemical Engineering*, **2021**, 152, 107391	4	1
402	Mathematical modeling and analysis of microwave-assisted freeze-drying in biopharmaceutical applications. *Computers and Chemical Engineering*, **2021**, 153, 107412	4	2
401	Tunable protein crystal size distribution via continuous slug-flow crystallization with spatially varying temperature. *CrystEngComm*, **2021**, 23, 6495-6505	3.3	0
400	ALVEN: Algebraic learning via elastic net for static and dynamic nonlinear model identification. *Computers and Chemical Engineering*, **2020**, 143, 107103	4	3

399	BEEP: A Python library for Battery Evaluation and Early Prediction. *SoftwareX*, **2020**, 11, 100506	2.7	12
398	An internal model control design method for failure-tolerant control with multiple objectives. *Computers and Chemical Engineering*, **2020**, 140, 106955	4	3
397	Learning the Physics of Pattern Formation from Images. *Physical Review Letters*, **2020**, 124, 060201	7.4	19
396	A new mathematical model for monitoring the temporal evolution of the ice crystal size distribution during freezing in pharmaceutical solutions. *European Journal of Pharmaceutics and Biopharmaceutics*, **2020**, 148, 148-159	5.7	13
395	Fault detection for uncertain LPV systems using probabilistic set-membership parity relation. *Journal of Process Control*, **2020**, 87, 27-36	3.9	12
394	Real-time Nonlinear Model Predictive Control (NMPC) Strategies using Physics-Based Models for Advanced Lithium-ion Battery Management System (BMS). *Journal of the Electrochemical Society*, **2020**, 167, 063505	3.9	12
393	Editors□Choice□Perspective□Challenges in Moving to Multiscale Battery Models: Where Electrochemistry Meets and Demands More from Math. *Journal of the Electrochemical Society*, **2020**, 167, 133501	3.9	7
392	Fast Stochastic Model Predictive Control of Unstable Dynamical Systems. *IFAC-PapersOnLine*, **2020**, 53, 7262-7267	0.7	0
391	Nonlinearity Measures for Distributed Parameter and Descriptor Systems. *IFAC-PapersOnLine*, **2020**, 53, 7545-7550	0.7	
390	Feedback Control of Dynamic Artificial Neural Networks Using Linear Matrix Inequalities **2020**,		1
389	Opportunities in tensorial data analytics for chemical and biological manufacturing processes. *Computers and Chemical Engineering*, **2020**, 143, 107099	4	6
388	Self-Optimizing Control of a Continuous-Flow Pharmaceutical Manufacturing Plant. *IFAC-PapersOnLine*, **2020**, 53, 11601-11606	0.7	1
387	Optimal charging of an electric vehicle battery pack: A real-time sensitivity-based model predictive control approach. *Journal of Power Sources*, **2020**, 461, 228133	8.9	18
386	Closed-loop optimization of fast-charging protocols for batteries with machine learning. *Nature*, **2020**, 578, 397-402	50.4	191
385	Multi-phase particle-in-cell coupled with population balance equation (MP-PIC-PBE) method for multiscale computational fluid dynamics simulation. *Computers and Chemical Engineering*, **2020**, 134, 106686	4	7
384	Fault detection and identification using Bayesian recurrent neural networks. *Computers and Chemical Engineering*, **2020**, 141, 106991	4	29
383	A Virtual Plant for Integrated Continuous Manufacturing of a Carfilzomib Drug Substance Intermediate, Part 1: CDI-Promoted Amide Bond Formation. *Organic Process Research and Development*, **2020**, 24, 1861-1875	3.9	11
382	A Virtual Plant for Integrated Continuous Manufacturing of a Carfilzomib Drug Substance Intermediate, Part 2: Enone Synthesis via a Barbier-Type Grignard Process. *Organic Process Research and Development*, **2020**, 24, 1876-1890	3.9	7

381	A Virtual Plant for Integrated Continuous Manufacturing of a Carfilzomib Drug Substance Intermediate, Part 3: Manganese-Catalyzed Asymmetric Epoxidation, Crystallization, and Filtration. *Organic Process Research and Development*, **2020**, 24, 1891-1908	3.9	12
380	Stochastic Dynamic Optimization and Model Predictive Control based on Polynomial Chaos Theory and Symbolic Arithmetic **2020**,		1
379	Stochastic model predictive control with joint chance constraints. *International Journal of Control*, **2020**, 93, 126-139	1.5	42
378	Designs of continuous-flow pharmaceutical crystallizers: developments and practice. *CrystEngComm*, **2019**, 21, 3534-3551	3.3	51
377	Data-driven prediction of battery cycle life before capacity degradation. *Nature Energy*, **2019**, 4, 383-391	62.3	498
376	Incorporating Solvent-Dependent Kinetics To Design a Multistage, Continuous, Combined Cooling/Antisolvent Crystallization Process. *Organic Process Research and Development*, **2019**, 23, 1960-1969	3.9	12
375	Monitoring and Advanced Control of Crystallization Processes **2019**, 313-345		4
374	Offset-free Input-Output Formulations of Stochastic Model Predictive Control Based on Polynomial Chaos Theory **2019**,		3
373	The Materials Research Platform: Defining the Requirements from User Stories. *Matter*, **2019**, 1, 1433-1438	12.7	13
372	Model Predictive Control of Polynomial Systems. *Control Engineering*, **2019**, 221-237	1	1
371	Direct coupling of continuum and kinetic Monte Carlo models for multiscale simulation of electrochemical systems. *Computers and Chemical Engineering*, **2019**, 121, 722-735	4	15
370	Coupling of the population balance equation into a two-phase model for the simulation of combined cooling and antisolvent crystallization using OpenFOAM. *Computers and Chemical Engineering*, **2019**, 123, 246-256	4	8
369	Mathematical modelling of the evolution of the particle size distribution during ultrasound-induced breakage of aspirin crystals. *Chemical Engineering Research and Design*, **2018**, 132, 170-177	5.5	8
368	A systematic approach for finding the objective function and active constraints for dynamic flux balance analysis. *Bioprocess and Biosystems Engineering*, **2018**, 41, 641-655	3.7	6
367	Nucleation and Growth Kinetics for Combined Cooling and Antisolvent Crystallization in a Mixed-Suspension, Mixed-Product Removal System: Estimating Solvent Dependency. *Crystal Growth and Design*, **2018**, 18, 1560-1570	3.5	33
366	Challenges and opportunities in biopharmaceutical manufacturing control. *Computers and Chemical Engineering*, **2018**, 110, 106-114	4	51
365	Multiscale Modeling and Simulation of Macromixing, Micromixing, and Crystal Size Distribution in Radial Mixers/Crystallizers. *Industrial & Engineering Chemistry Research*, **2018**, 57, 5433-5441	3.9	16
364	Tablet coating by injection molding technology - Optimization of coating formulation attributes and coating process parameters. *European Journal of Pharmaceutics and Biopharmaceutics*, **2018**, 122, 25-36	5.7	8

363	Low-Cost Noninvasive Real-Time Imaging for Tubular Continuous-Flow Crystallization. *Chemical Engineering and Technology*, **2018**, 41, 143-148	2	14
362	openCrys: Open-Source Software for the Multiscale Modeling of Combined Antisolvent and Cooling Crystallization in Turbulent Flow. *Industrial & Engineering Chemistry Research*, **2018**, 57, 11702-11711	3.9	11
361	Closed-Loop Active Fault Diagnosis for Stochastic Linear Systems **2018**,		3
360	Fast stochastic model predictive control of end-to-end continuous pharmaceutical manufacturing 1 1Financial support from Novartis is acknowledged.. *Computer Aided Chemical Engineering*, **2018**, 353-378	0.6	2
359	Mixed Polynomial Chaos and Worst-Case Synthesis Approach to Robust Observer based Linear Quadratic Regulation **2018**,		1
358	Control and Systems Theory for Advanced Manufacturing. *Lecture Notes in Control and Information Sciences - Proceedings*, **2018**, 63-79	0.2	
357	Standard representation and unified stability analysis for dynamic artificial neural network models. *Neural Networks*, **2018**, 98, 251-262	9.1	16
356	Demonstration of pharmaceutical tablet coating process by injection molding technology. *International Journal of Pharmaceutics*, **2018**, 535, 106-112	6.5	6
355	An Information-Theoretic Framework for Fault Detection Evaluation and Design of Optimal Dimensionality Reduction Methods. *IFAC-PapersOnLine*, **2018**, 51, 1311-1316	0.7	1
354	Review□ynamic Models of Li-Ion Batteries for Diagnosis and Operation: A Review and Perspective. *Journal of the Electrochemical Society*, **2018**, 165, A3656-A3673	3.9	70
353	On-demand manufacturing of clinical-quality biopharmaceuticals. *Nature Biotechnology*, **2018**,	44.5	49
352	Sparse canonical variate analysis approach for process monitoring. *Journal of Process Control*, **2018**, 71, 90-102	3.9	18
351	A Systematic Approach to Process Data Analytics in Pharmaceutical Manufacturing **2018**, 295-312		1
350	Locality preserving discriminative canonical variate analysis for fault diagnosis. *Computers and Chemical Engineering*, **2018**, 117, 309-319	4	20
349	Robust static and fixed-order dynamic output feedback control of discrete-time parametric uncertain Lur□systems: Sequential SDP relaxation approaches. *Optimal Control Applications and Methods*, **2017**, 38, 36-58	1.7	4
348	(Invited) Analyzing and Minimizing Capacity Fade through Optimal Model-based Control - Theory and Experimental Validation. *ECS Transactions*, **2017**, 75, 51-75	1	13
347	Analysis of focused indirect ultrasound via high-speed spatially localized pressure sensing and its consequences on nucleation. *Chemical Engineering and Processing: Process Intensification*, **2017**, 117, 186-194	3.7	7
346	Model Predictive Control of an Integrated Continuous Pharmaceutical Manufacturing Pilot Plant. *Organic Process Research and Development*, **2017**, 21, 844-854	3.9	34

345	Continuous Heterogeneous Crystallization on Excipient Surfaces. *Crystal Growth and Design*, **2017**, 17, 3321-3330	3.5	26
344	Multi-Scale Simulation of Heterogeneous Surface Film Growth Mechanisms in Lithium-Ion Batteries. *Journal of the Electrochemical Society*, **2017**, 164, E3335-E3344	3.9	36
343	Integrated B2B-NMPC control strategy for batch/semibatch crystallization processes. *AICHE Journal*, **2017**, 63, 5007-5018	3.6	13
342	Design of Piecewise Affine and Linear Time-Varying Model Predictive Control Strategies for Advanced Battery Management Systems. *Journal of the Electrochemical Society*, **2017**, 164, A949-A959	3.9	15
341	A method for learning a sparse classifier in the presence of missing data for high-dimensional biological datasets. *Bioinformatics*, **2017**, 33, 2897-2905	7.2	8
340	Optimal Structure Synthesis of Ternary Distillation Processes Using a Stepwise VLE Description. *Computer Aided Chemical Engineering*, **2017**, 40, 739-744	0.6	
339	Fault detection of process correlation structure using canonical variate analysis-based correlation features. *Journal of Process Control*, **2017**, 58, 131-138	3.9	30
338	Role of Automatic Process Control in Quality by Design **2017**, 25-53		
337	Opportunities and challenges of real-time release testing in biopharmaceutical manufacturing. *Biotechnology and Bioengineering*, **2017**, 114, 2445-2456	4.9	64
336	Towards adaptive health-aware charging of Li-ion batteries: A real-time predictive control approach using first-principles models **2017**,		5
335	On stability of stochastic linear systems via polynomial chaos expansions **2017**,		8
334	**2017**,		1
333	Probabilistic robust parity relation for fault detection using polynomial chaos. *IFAC-PapersOnLine*, **2017**, 50, 1019-1024	0.7	1
332	Polynomial Chaos-Based H 2 -optimal Static Output Feedback Control of Systems with Probabilistic Parametric Uncertainties. *IFAC-PapersOnLine*, **2017**, 50, 3536-3541	0.7	2
331	Principal Component Analysis of Process Datasets with Missing Values. *Processes*, **2017**, 5, 38	2.9	16
330	pH and conductivity control in an integrated biomanufacturing plant **2016**,		1
329	Nonlinear model predictive control using polynomial optimization methods **2016**,		7
328	Control on a molecular scale: A perspective **2016**,		3

327	Perspectives on process monitoring of industrial systems. *Annual Reviews in Control*, **2016**, 42, 190-200	10.3	82
326	Mathematical modeling and optimal design of multi-stage slug-flow crystallization. *Computers and Chemical Engineering*, **2016**, 95, 240-248	4	18
325	Output feedback model predictive control with probabilistic uncertainties for linear systems **2016**,		6
324	A robust dual-mode MPC approach to ensuring critical quality attributes in Quality-by-Design **2016**,		3
323	Regularized maximum likelihood estimation of sparse stochastic monomolecular biochemical reaction networks. *Computers and Chemical Engineering*, **2016**, 90, 111-120	4	2
322	Estimation of local concentration from measurements of stochastic adsorption dynamics using carbon nanotube-based sensors. *Korean Journal of Chemical Engineering*, **2016**, 33, 33-45	2.8	
321	On the Analysis of the Eigenvalues of Uncertain Matrices by mu and nu: Applications to Bifurcation Avoidance and Convergence Rates. *IEEE Transactions on Automatic Control*, **2016**, 61, 748-753	5.9	6
320	Constrained zonotopes: A new tool for set-based estimation and fault detection. *Automatica*, **2016**, 69, 126-136	5.7	95
319	Switched model predictive control of switched linear systems: Feasibility, stability and robustness. *Automatica*, **2016**, 67, 8-21	5.7	139
318	Designer Dual Therapy Nanolayered Implant Coatings Eradicate Biofilms and Accelerate Bone Tissue Repair. *ACS Nano*, **2016**, 10, 4441-50	16.7	152
317	Free surface electrospinning of aqueous polymer solutions from a wire electrode. *Chemical Engineering Journal*, **2016**, 289, 203-211	14.7	34
316	Economical control of indoor air quality in underground metro station using an iterative dynamic programming-based ventilation system. *Indoor and Built Environment*, **2016**, 25, 949-961	1.8	17
315	Multi-Scale Modeling of Solid Electrolyte Interface Formation in Lithium-Ion Batteries. *Computer Aided Chemical Engineering*, **2016**, 38, 157-162	0.6	14
314	Polynomial chaos-based robust design of systems with probabilistic uncertainties. *AICHE Journal*, **2016**, 62, 3310-3318	3.6	25
313	An Analytical Solution for Exciton Generation, Reaction, and Diffusion in Nanotube and Nanowire-Based Solar Cells. *Journal of Physical Chemistry Letters*, **2016**, 7, 2683-8	6.4	6
312	Fast Model Predictive Control for hydrogen outflow regulation in Ethanol Steam Reformers **2016**,		2
311	Optimal charging of a Li-ion cell: A hybrid Model Predictive Control approach **2016**,		4
310	Crystallization of Calcium Sulphate During Phosphoric Acid Production: Modeling Particle Shape and Size Distribution. *Procedia Engineering*, **2016**, 138, 390-402		16

309	LIONSIMBA: A Matlab Framework Based on a Finite Volume Model Suitable for Li-Ion Battery Design, Simulation, and Control. *Journal of the Electrochemical Society*, **2016**, 163, A1192-A1205	3.9	93
308	Robustness analysis, prediction, and estimation for uncertain biochemical networks: An overview. *Journal of Process Control*, **2016**, 42, 14-34	3.9	19
307	Just-in-Time-Learning based Extended Prediction Self-Adaptive Control for batch processes. *Journal of Process Control*, **2016**, 43, 1-9	3.9	19
306	Optimal Health-aware Charging Protocol for Lithium-ion Batteries: A Fast Model Predictive Control Approach. *IFAC-PapersOnLine*, **2016**, 49, 827-832	0.7	18
305	Mathematical Modeling and Analysis of Carbon Nanotube Photovoltaic Systems**Support acknowledged from the U.S. Department of Energy and the National Science Foundation.. *IFAC-PapersOnLine*, **2016**, 49, 442-447	0.7	1
304	Closed-loop input design for guaranteed fault diagnosis using set-valued observers. *Automatica*, **2016**, 74, 107-117	5.7	44
303	State-of-charge estimation in lithium-ion batteries: A particle filter approach. *Journal of Power Sources*, **2016**, 331, 208-223	8.9	72
302	Maximization of ellipsoidal design space for continuous-time systems: A robust optimal control approach **2016**,		1
301	Control systems analysis and design of multiscale simulation models **2016**,		1
300	Gypsum Crystallization during Phosphoric Acid Production: Modeling and Experiments Using the Mixed-Solvent-Electrolyte Thermodynamic Model. *Industrial & Engineering Chemistry Research*, **2015**, 54, 7914-7924	3.9	19
299	Canonical variate analysis-based monitoring of process correlation structure using causal feature representation. *Journal of Process Control*, **2015**, 32, 109-116	3.9	28
298	A combined canonical variate analysis and Fisher discriminant analysis (CVA–FDA) approach for fault diagnosis. *Computers and Chemical Engineering*, **2015**, 77, 1-9	4	59
297	Diagnosis of multiple and unknown faults using the causal map and multivariate statistics. *Journal of Process Control*, **2015**, 28, 27-39	3.9	53
296	Layer number dependence of MoS2 photoconductivity using photocurrent spectral atomic force microscopic imaging. *ACS Nano*, **2015**, 9, 2843-55	16.7	63
295	Indirect Ultrasonication in Continuous Slug-Flow Crystallization. *Crystal Growth and Design*, **2015**, 15, 2486-2492	3.5	70
294	Elastic net with Monte Carlo sampling for data-based modeling in biopharmaceutical manufacturing facilities. *Computers and Chemical Engineering*, **2015**, 80, 30-36	4	16
293	Robust optimal control for the maximization of design space **2015**,		3
292	Effect of jet velocity on crystal size distribution from antisolvent and cooling crystallizations in a dual impinging jet mixer. *Chemical Engineering and Processing: Process Intensification*, **2015**, 97, 242-247	3.7	30

291	Perspectives on Process Monitoring of Industrial Systems ? ?BP is acknowledged for funding.. *IFAC-PapersOnLine*, **2015**, 48, 931-939	0.7	8
290	Computational fluid dynamics modeling of mixing effects for crystallization in coaxial nozzles. *Chemical Engineering and Processing: Process Intensification*, **2015**, 97, 213-232	3.7	18
289	Real-time model predictive control for the optimal charging of a lithium-ion battery **2015**,		33
288	Understanding temperature-induced primary nucleation in dual impinging jet mixers. *Chemical Engineering and Processing: Process Intensification*, **2015**, 97, 187-194	3.7	7
287	Achieving continuous manufacturing: technologies and approaches for synthesis, workup, and isolation of drug substance. May 20-21, 2014 Continuous Manufacturing Symposium. *Journal of Pharmaceutical Sciences*, **2015**, 104, 781-91	3.9	108
286	A mechanistic model for drug release in PLGA biodegradable stent coatings coupled with polymer degradation and erosion. *Journal of Biomedical Materials Research - Part A*, **2015**, 103, 2269-79	5.4	49
285	The Application of an Automated Control Strategy for an Integrated Continuous Pharmaceutical Pilot Plant. *Organic Process Research and Development*, **2015**, 19, 1088-1100	3.9	59
284	Ellipsoidal bounds on state trajectories for discrete-time systems with linear fractional uncertainties. *Optimization and Engineering*, **2015**, 16, 695-711	2.1	6
283	Nonlinear Model Predictive Control of Systems with Probabilistic Time-invariant Uncertainties**Financial support is acknowledged from the NSF Graduate Re-search Fellowship and Novartis Pharma AGhttp://www.hamecmopsys.ens2m.fr/.. *IFAC-PapersOnLine*, **2015**, 48, 16-25	0.7	4
282	Optimal spatial field control for controlled release. *Optimal Control Applications and Methods*, **2015**, 36, 968-984	1.7	
281	Derivation of an Analytical Solution to a Reaction-Diffusion Model for Autocatalytic Degradation and Erosion in Polymer Microspheres. *PLoS ONE*, **2015**, 10, e0135506	3.7	8
280	Quality-by-design by skewed spherical structured singular value. *IET Control Theory and Applications* , **2015**, 9, 2202-2210	2.5	4
279	Indoor air quality control for improving passenger health in subway platforms using an outdoor air quality dependent ventilation system. *Building and Environment*, **2015**, 92, 407-417	6.5	49
278	Control of self-assembly in micro- and nano-scale systems. *Journal of Process Control*, **2015**, 27, 38-49	3.9	27
277	Fast robust model predictive control of high-dimensional systems **2015**,		1
276	Control systems technology in the advanced manufacturing of biologic drugs **2015**,		4
275	Plant-wide model predictive control for a continuous pharmaceutical process **2015**,		7
274	Optimal Low Temperature Charging of Lithium-ion Batteries. *IFAC-PapersOnLine*, **2015**, 48, 1216-1221	0.7	7

273	Control systems engineering in continuous pharmaceutical manufacturing. May 20-21, 2014 Continuous Manufacturing Symposium. *Journal of Pharmaceutical Sciences*, **2015**, 104, 832-9	3.9	73
272	Canonical variate analysis-based contributions for fault identification. *Journal of Process Control*, **2015**, 26, 17-25	3.9	71
271	Assessment of Recent Process Analytical Technology (PAT) Trends: A Multiauthor Review. *Organic Process Research and Development*, **2015**, 19, 3-62	3.9	251
270	State Estimation of the Time-Varying and Spatially Localized Concentration of Signal Molecules from the Stochastic Adsorption Dynamics on the Carbon Nanotube-Based Sensors and Its Application to Tumor Cell Detection. *PLoS ONE*, **2015**, 10, e0141930	3.7	
269	Modification of Crystal Shape through Deep Temperature Cycling. *Industrial & Engineering Chemistry Research*, **2014**, 53, 5325-5336	3.9	49
268	Tunable staged release of therapeutics from layer-by-layer coatings with clay interlayer barrier. *Biomaterials*, **2014**, 35, 2507-17	15.6	123
267	Writing Papers on Control Theory [Focus on Education]. *IEEE Control Systems*, **2014**, 34, 75-75	2.9	1
266	Optimal charging profiles for mechanically constrained lithium-ion batteries. *Physical Chemistry Chemical Physics*, **2014**, 16, 277-87	3.6	47
265	Special issue in Honor of Manfred Morari's 60th Birthday. *Computers and Chemical Engineering*, **2014**, 70, 1-2	4	
264	Necessary and sufficient conditions for robust reliable control in the presence of model uncertainties and system component failures. *Computers and Chemical Engineering*, **2014**, 70, 67-77	4	2
263	Continuous-Flow Tubular Crystallization in Slugs Spontaneously Induced by Hydrodynamics. *Crystal Growth and Design*, **2014**, 14, 851-860	3.5	78
262	Analysis of Finite Difference Discretization Schemes for Diffusion in Spheres with Variable Diffusivity. *Computers and Chemical Engineering*, **2014**, 71, 241-252	4	23
261	Nonlinear Model-Based Control of Thin-Film Drying for Continuous Pharmaceutical Manufacturing. *Industrial & Engineering Chemistry Research*, **2014**, 53, 7447-7460	3.9	14
260	Two-Dimensional Contribution Map for Fault Identification [Focus on Education]. *IEEE Control Systems*, **2014**, 34, 72-77	2.9	21
259	Computational complexity and related topics of robustness margin calculation using □ theory: A review of theoretical developments. *Computers and Chemical Engineering*, **2014**, 70, 122-132	4	1
258	JITL-based concentration control for semi-batch pH-shift reactive crystallization of l-glutamic acid. *Journal of Process Control*, **2014**, 24, 415-421	3.9	11
257	Input design for guaranteed fault diagnosis using zonotopes. *Automatica*, **2014**, 50, 1580-1589	5.7	93
256	Application of Continuous Crystallization in an Integrated Continuous Pharmaceutical Pilot Plant. *Crystal Growth and Design*, **2014**, 14, 2148-2157	3.5	60

255	A Hybrid Stochastic-Deterministic Approach For Active Fault Diagnosis Using Scenario Optimization. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 1102-1107		6
254	Optimal Experimental Design for Probabilistic Model Discrimination Using Polynomial Chaos. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 4103-4109		9
253	Active Fault Diagnosis for Nonlinear Systems with Probabilistic Uncertainties. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 7079-7084		28
252	Papers Receive More Citations After Rejection [Publication Activities]. *IEEE Control Systems*, **2014**, 34, 22-23	2.9	5
251	Simon van der Meer's Nobel Prize in Control Engineering [From the Editor]. *IEEE Control Systems*, **2014**, 34, 6-6	2.9	
250	Reproducible research [From the Editor]. *IEEE Control Systems*, **2014**, 34, 6-7	2.9	3
249	Perceptions of Science and Engineering [From the Editor]. *IEEE Control Systems*, **2014**, 34, 6-7	2.9	1
248	Control of Advanced Manufacturing Processes [From the Editor]. *IEEE Control Systems*, **2014**, 34, 6-6	2.9	
247	Do You Have a Control Tool or a Control Toolbox? [From the Editor]. *IEEE Control Systems*, **2014**, 34, 6-7	2.9	2
246	Volume maximization of consistent parameter sets for linear fractional models **2014**,		4
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3	Robust reliable decentralized control	7
2	A reconciliation between quantitative feedback theory and robust multivariable control	1
1	Control relevant identification of sheet and film processes	8