

# Antonio Flores-Tlacuahuac

## List of Publications by Citations

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104  
papers

1,836  
citations

25  
h-index

37  
g-index

105  
ext. papers

2,108  
ext. citations

4.3  
avg, IF

5.33  
L-index

#	Paper	IF	Citations
104	Simultaneous Cyclic Scheduling and Control of a Multiproduct CSTR. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2006</b> , 45, 6698-6712	3.9	110
103	Stability of multiobjective predictive control: A utopia-tracking approach. <i>Automatica</i> , <b>2012</b> , 48, 2627-2637	3.7	84
102	Simultaneous mixed-integer dynamic optimization for integrated design and control. <i>Computers and Chemical Engineering</i> , <b>2007</b> , 31, 588-600	4	72
101	Modeling, simulation and control of an internally heat integrated pressure-swing distillation process for bioethanol separation. <i>Computers and Chemical Engineering</i> , <b>2011</b> , 35, 1532-1546	4	66
100	Dynamic Optimization of HIPS Open-Loop Unstable Polymerization Reactors. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2005</b> , 44, 2659-2674	3.9	65
99	Simultaneous cyclic scheduling and optimal control of polymerization reactors. <i>AIChE Journal</i> , <b>2007</b> , 53, 2301-2315	3.6	63
98	Optimal Molecular Design of Ionic Liquids for High-Purity Bioethanol Production. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2011</b> , 50, 5153-5168	3.9	53
97	DETAILED MODELING, SIMULATION, AND PARAMETER ESTIMATION OF NITROXIDE MEDIATED LIVING FREE RADICAL POLYMERIZATION OF STYRENE 1*. <i>Polymer-Plastics Technology and Engineering</i> , <b>2002</b> , 10, 227-263		48
96	Simultaneous design, scheduling, and optimal control of a methyl-methacrylate continuous polymerization reactor. <i>AIChE Journal</i> , <b>2008</b> , 54, 3160-3170	3.6	47
95	Modeling and simulation of lithium-ion batteries. <i>Computers and Chemical Engineering</i> , <b>2011</b> , 35, 1937-1948	4.8	46
94	Optimal molecular design of working fluids for sustainable low-temperature energy recovery. <i>Computers and Chemical Engineering</i> , <b>2015</b> , 72, 334-349	4	44
93	Lagrangean heuristic for the scheduling and control of polymerization reactors. <i>AIChE Journal</i> , <b>2008</b> , 54, 163-182	3.6	42
92	Simultaneous Optimal Design of an Extractive Column and Ionic Liquid for the Separation of Bioethanol/Water Mixtures. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2012</b> , 51, 5866-5880	3.9	41
91	Optimization of Fractional Order Dynamic Chemical Processing Systems. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2014</b> , 53, 5110-5127	3.9	39
90	An optimization approach for CO <sub>2</sub> capture using ionic liquids. <i>Journal of Cleaner Production</i> , <b>2017</b> , 168, 1652-1667	10.3	36
89	Technoeconomic and Dynamical Analysis of a CO <sub>2</sub> Capture Pilot-Scale Plant Using Ionic Liquids. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2015</b> , 54, 11360-11370	3.9	35
88	Global Optimization of Highly Nonlinear Dynamic Systems. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2008</b> , 47, 2643-2655	3.9	33

87	MINLP Formulation for Simultaneous Planning, Scheduling, and Control of Short-Period Single-Unit Processing Systems. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2014</b> , 53, 14679-14694	3.9	32
86	Multiobjective Nonlinear Model Predictive Control of a Class of Chemical Reactors. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2012</b> , 51, 5891-5899	3.9	30
85	Returning to Basics: Direct Integration of the Full Molecular-Weight Distribution Equations in Addition Polymerization. <i>Macromolecular Theory and Simulations</i> , <b>2010</b> , 19, 151-157	1.5	30
84	Optimal Grade Transitions in the High-Impact Polystyrene Polymerization Process. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2006</b> , 45, 6175-6189	3.9	30
83	Efficient numerical integration of stiff differential equations in polymerisation reaction engineering: Computational aspects and applications. <i>Canadian Journal of Chemical Engineering</i> , <b>2012</b> , 90, 804-823	2.3	29
82	Simultaneous Scheduling and Control of Multiproduct Continuous Parallel Lines. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2010</b> , 49, 7909-7921	3.9	28
81	Steady-State Nonlinear Bifurcation Analysis of a High-Impact Polystyrene Continuous Stirred Tank Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2000</b> , 39, 1972-1979	3.9	28
80	Simultaneous Optimal Design of Organic Mixtures and Rankine Cycles for Low-Temperature Energy Recovery. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2015</b> , 54, 3367-3383	3.9	27
79	Integrated control and process design during optimal polymer grade transition operations. <i>Computers and Chemical Engineering</i> , <b>2008</b> , 32, 2823-2837	4	25
78	Integrated Design and Control Using a Simultaneous Mixed-Integer Dynamic Optimization Approach. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2009</b> , 48, 1933-1943	3.9	23
77	Effect of Process Design/Operation on the Steady-State Operability of a Methyl Methacrylate Polymerization Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>1999</b> , 38, 4790-4804	3.9	23
76	Analyzing the effects of comfort relaxation on energy demand flexibility of buildings: A multiobjective optimization approach. <i>Energy and Buildings</i> , <b>2014</b> , 85, 416-426	7	21
75	A Computational Framework for Identifiability and Ill-Conditioning Analysis of Lithium-Ion Battery Models. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2016</b> , 55, 3026-3042	3.9	20
74	Non-linear bifurcation analysis of the living nitroxide-mediated radical polymerization of styrene in a CSTR. <i>Chemical Engineering Science</i> , <b>2006</b> , 61, 370-387	4.4	20
73	Dynamic optimization of a semi-batch reactor for polyurethane production. <i>Chemical Engineering Science</i> , <b>2005</b> , 60, 3061-3079	4.4	20
72	Optimal Synthesis of a High Purity Bioethanol Distillation Column Using Ionic Liquids. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2011</b> , 50, 5175-5190	3.9	19
71	Simultaneous molecular and process design for waste heat recovery. <i>Energy</i> , <b>2016</b> , 99, 32-47	7.9	18
70	A reactive optimization strategy for the simultaneous planning, scheduling and control of short-period continuous reactors. <i>Computers and Chemical Engineering</i> , <b>2016</b> , 84, 507-515	4	18

69	A Multiobjective Optimization Approach for the Simultaneous Single Line Scheduling and Control of CSTRs. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2012</b> , 51, 5881-5890	3.9	18
68	GIS-based modeling of residual biomass availability for energy and production in Mexico. <i>Renewable and Sustainable Energy Reviews</i> , <b>2020</b> , 120, 109610	16.2	18
67	Integration of distributed generation technologies on sustainable buildings. <i>Applied Energy</i> , <b>2018</b> , 224, 582-601	10.7	18
66	Simultaneous Cyclic Scheduling and Control of Tubular Reactors: Single Production Lines. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2010</b> , 49, 11453-11463	3.9	17
65	Simultaneous Cyclic Scheduling and Control of Tubular Reactors: Parallel Production Lines. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2011</b> , 50, 8086-8096	3.9	16
64	Dynamic optimization of a cryogenic air separation unit using a derivative-free optimization approach. <i>Computers and Chemical Engineering</i> , <b>2018</b> , 109, 1-8	4	15
63	A stochastic optimization approach for the design of organic fluid mixtures for low-temperature heat recovery. <i>Applied Energy</i> , <b>2017</b> , 198, 145-159	10.7	14
62	A mixed-integer dynamic optimization approach for the optimal planning of distributed biorefineries. <i>Computers and Chemical Engineering</i> , <b>2015</b> , 80, 37-62	4	14
61	Dynamic optimization for the planning of a waste management system involving multiple cities. <i>Journal of Cleaner Production</i> , <b>2017</b> , 165, 190-203	10.3	14
60	Optimal Operating Policies for the Nitroxide-Mediated Radical Polymerization of Styrene in a Semibatch Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2006</b> , 45, 4637-4652	3.9	13
59	Optimal transition and robust control design for exothermic continuous reactors. <i>AIChE Journal</i> , <b>2005</b> , 51, 895-908	3.6	13
58	A controllability analysis of a pilot-scale CO <sub>2</sub> capture plant using ionic liquids. <i>AIChE Journal</i> , <b>2016</b> , 62, 3298-3309	3.6	13
57	Simultaneous optimal design of multi-stage organic Rankine cycles and working fluid mixtures for low-temperature heat sources. <i>Computers and Chemical Engineering</i> , <b>2016</b> , 89, 106-126	4	13
56	Model-Based Experimental Design to Estimate Kinetic Parameters of the Enzymatic Hydrolysis of Lignocellulose. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2013</b> , 52, 4834-4850	3.9	12
55	Integrated utility pricing and design of water-energy rural off-grid systems. <i>Energy</i> , <b>2019</b> , 177, 511-529	7.9	11
54	Sustainable silicon photovoltaics manufacturing in a global market: A techno-economic, tariff and transportation framework. <i>Applied Energy</i> , <b>2018</b> , 212, 704-719	10.7	11
53	Optimal Water Quality Control of Sequencing Batch Reactors Under Uncertainty. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 9571-9590	3.9	11
52	Sequential Use of Geographic Information System and Mathematical Programming for Optimal Planning for Energy Production Systems from Residual Biomass. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 15818-15837	3.9	10

51	Facilities Location for Residual Biomass Production System Using Geographic Information System under Uncertainty. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 3331-3348	8.3	10
50	Bifurcation Behavior of a Large Scale Waste Water Treatment Plant. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2009</b> , 48, 2605-2615	3.9	10
49	Complex Nonlinear Behavior in the Full-Scale High-Impact Polystyrene Process. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2005</b> , 44, 2802-2814	3.9	10
48	The bifurcation behavior of a polyurethane continuous stirred tank reactor. <i>Chemical Engineering Science</i> , <b>2006</b> , 61, 7368-7385	4.4	10
47	A Multistakeholder Approach for the Optimal Planning of Sustainable Energy Systems. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 9451-9460	8.3	9
46	Dynamic Modeling and Experimental Validation of the MMA Cell-Cast Process for Plastic Sheet Production. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2006</b> , 45, 8539-8553	3.9	9
45	Steady-State Multiplicity Behavior Analysis of a High-Impact Polystyrene Continuous Stirred Tank Reactor Using a Bifunctional Initiator. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2006</b> , 45, 1689-1707	3.9	9
44	Optimal sustainable water-Energy storage strategies for off-grid systems in low-income communities. <i>Computers and Chemical Engineering</i> , <b>2019</b> , 123, 87-109	4	9
43	Optimal Start-Up Policies for a Solar Thermal Power Plant. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 1026-1038	3.9	8
42	Grade transition dynamic simulation of HIPS polymerization reactors. <i>Computers and Chemical Engineering</i> , <b>2005</b> , 30, 357-375	4	8
41	Modeling of Nonlinear Polyurethane Production in Batch Reactors Using a Kinetic Probabilistic Approach. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2002</b> , 41, 5207-5219	3.9	8
40	An efficient direct/indirect transcription approach for singular optimal control. <i>AIChE Journal</i> , <b>2019</b> , 65, 937-946	3.6	8
39	Optimization of the amines-CO <sub>2</sub> capture process by a nonequilibrium rate-based modeling approach. <i>AIChE Journal</i> , <b>2020</b> , 66, e16978	3.6	7
38	A Multiobjective Dynamic Optimization Approach for a Methyl-Methacrylate Plastic Sheet Reactor. <i>Macromolecular Reaction Engineering</i> , <b>2014</b> , 8, 358-373	1.5	7
37	Grade Transition Dynamic Optimization of the Living Nitroxide-Mediated Radical Polymerization of Styrene in a Tubular Reactor. <i>Macromolecular Reaction Engineering</i> , <b>2010</b> , 4, 516-533	1.5	7
36	An indirect approach for singular optimal control problems. <i>Computers and Chemical Engineering</i> , <b>2020</b> , 139, 106923	4	7
35	Optimal design of the water-energy-food nexus for rural communities. <i>Computers and Chemical Engineering</i> , <b>2020</b> , 143, 107120	4	7
34	Optimal model-based aeration control policies in a sequencing batch reactor. <i>Computers and Chemical Engineering</i> , <b>2016</b> , 85, 124-135	4	6

33	Optimal Start-up Policies for a Nanofluid-Based Solar Thermal Power Plant. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 19135-19148	3.9	6
32	Product Dynamic Transitions Using a Derivative-Free Optimization Trust-Region Approach. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2016</b> , 55, 8586-8601	3.9	6
31	Thermo-Economic Multiobjective Optimization of a LOW Temperature Organic Rankine Cycle for Energy Recovery. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2017</b> , 56, 11477-11495	3.9	5
30	Multiobjective Optimization Approach for Cellulosic Biomass Pretreatment. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2013</b> , 52, 5357-5364	3.9	5
29	Dynamic optimization of the methylmethacrylate cell-cast process for plastic sheet production. <i>AIChE Journal</i> , <b>2009</b> , 55, 1464-1486	3.6	5
28	Design of domestic photovoltaics manufacturing systems under global constraints and uncertainty. <i>Renewable Energy</i> , <b>2020</b> , 148, 1174-1189	8.1	5
27	Water-Energy Off-Grid Systems Design Using a Dominant Stakeholder Approach. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2019</b> , 7, 8554-8578	8.3	4
26	A Lagrangean decomposition optimization approach for long-term planning, scheduling and control. <i>Computers and Chemical Engineering</i> , <b>2020</b> , 135, 106713	4	4
25	Multiobjective Dynamic Optimization of the Cell-Cast Process for Poly(methyl methacrylate). <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2014</b> , 53, 14351-14365	3.9	4
24	Optimal Molecular Design of Low-Temperature Organic Fluids under Uncertain Conditions. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 5058-5069	3.9	3
23	Interpolated controllers for the robust transition control of a class of reactors. <i>AIChE Journal</i> , <b>2006</b> , 52, 247-254	3.6	3
22	A multi-scenario nonlinear model predictive control approach for robust product transitions. <i>Canadian Journal of Chemical Engineering</i> , <b>2019</b> , 97, 165-177	2.3	3
21	Optimal configuration of metallic nanoparticles to maximize heat transfer in a 2D square plate. <i>IFAC-PapersOnLine</i> , <b>2019</b> , 52, 207-211	0.7	2
20	110th Anniversary: Modeling National Power Flow Systems through the Energy Hub Approach. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 14252-14266	3.9	2
19	Logic-Based Outer-Approximation Algorithm for Solving Discrete-Continuous Dynamic Optimization Problems. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2014</b> , 53, 5067-5080	3.9	2
18	Dynamic modelling, nonlinear parameter fitting and sensitivity analysis of a living free-radical polymerization reactor. <i>Computer Aided Chemical Engineering</i> , <b>2003</b> , 16, 21-39	0.6	2
17	Robust model predictive control for a nanofluid based solar thermal power plant. <i>Journal of Process Control</i> , <b>2020</b> , 94, 97-109	3.9	2
16	Improving molecular design through a machine learning approach. <i>Chemical Engineering and Processing: Process Intensification</i> , <b>2020</b> , 158, 108173	3.7	1

15	A Scheduling and Nonlinear Model Predictive Control Strategy for Continuous Polymerization Reactors. <i>Macromolecular Reaction Engineering</i> , <b>2014</b> , 8, 347-357	1.5	1
14	Robust Optimal Design of Working Fluids for Sustainable Low Temperature Energy Recovery Under Uncertain Conditions. <i>International Journal of Chemical Reactor Engineering</i> , <b>2017</b> , 15,	1.2	1
13	Marginalization index as social measure for Acetone-Butanol-Ethanol supply chain planning. <i>Renewable and Sustainable Energy Reviews</i> , <b>2022</b> , 154, 111816	16.2	1
12	Optimal computer-aided molecular design of ionic liquid mixtures for post-combustion carbon dioxide capture. <i>Computers and Chemical Engineering</i> , <b>2022</b> , 157, 107622	4	1
11	Novel Approach for Weighting in the Geographic Information System Focused on a Multistakeholder Problem: Case for the Residual Biomass Processing System. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 23249-23260	3.9	1
10	A MINLP approach to improve heat transfer in flat plates through the optimal distribution of nanoparticles. <i>Computers and Chemical Engineering</i> , <b>2021</b> , 152, 107389	4	1
9	Optimal Startup/Shutdown Operating Policies with a Recombinant Strain Continuously Stirred Bioreactor. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2010</b> , 49, 308-316	3.9	0
8	Computer aided molecular design coupled with molecular dynamics as a novel approach to design new lubricants. <i>Computers and Chemical Engineering</i> , <b>2021</b> , 156, 107523	4	0
7	Dynamic Optimization and Control Strategy for the Planning of a Waste Management System involving Multiple Cities. <i>Computer Aided Chemical Engineering</i> , <b>2017</b> , 40, 1291-1296	0.6	
6	Dynamic Optimization for the Optimal Location of New Industrial Facilities Considering the Sustainability of the Watershed. <i>Computer Aided Chemical Engineering</i> , <b>2015</b> , 36, 421-450	0.6	
5	Effect of process design/operation on the open-loop operability of a polymerization reactor. <i>Computers and Chemical Engineering</i> , <b>1998</b> , 22, S703-S706	4	
4	Nonlinear analysis and design of high-impact polymerization reactors using a bifunctional initiator. <i>Computer Aided Chemical Engineering</i> , <b>2005</b> , 20, 745-750	0.6	
3	Design of Photovoltaics-Based Manufacturing System Using Computer-Aided Design <b>2019</b> , 75-88		
2	Integral System to Determine Feasible Regions for Biomass Utilization. <i>Computer Aided Chemical Engineering</i> , <b>2017</b> , 40, 1891-1896	0.6	
1	Residual Biomass Use for Energy Generation. <i>Strategies for Sustainability</i> , <b>2022</b> , 237-270	0.8	