

Warren D Seider

List of Publications by Year in descending order

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93
papers

2,699
citations

218381

26
h-index

197535

49
g-index

97
all docs

97
docs citations

97
times ranked

1436
citing authors

#	ARTICLE	IF	CITATIONS
1	Journal review. Azeotropic distillation. <i>AIChE Journal</i> , 1996, 42, 96-130.	1.8	320
2	Plant-specific dynamic failure assessment using Bayesian theory. <i>Chemical Engineering Science</i> , 2006, 61, 7036-7056.	1.9	177
3	Computation of phase and chemical equilibrium: Part I. Local and constrained minima in Gibbs free energy. <i>AIChE Journal</i> , 1979, 25, 991-999.	1.8	159
4	Homotopy-continuation method for stability analysis in the global minimization of the Gibbs free energy. <i>Fluid Phase Equilibria</i> , 1995, 103, 213-249.	1.4	145
5	New Structure and Design Methodology for Water Networks. <i>Industrial & Engineering Chemistry Research</i> , 2001, 40, 6140-6146.	1.8	100
6	Equilibrium solubilities of β -carotene in supercritical carbon dioxide. <i>Fluid Phase Equilibria</i> , 1990, 59, 57-71.	1.4	96
7	Multistep nonlinear predictive controller. <i>Industrial & Engineering Chemistry Research</i> , 1989, 28, 1812-1822.	1.8	87
8	Semicontinuous, Pressure-Swing Distillation. <i>Industrial & Engineering Chemistry Research</i> , 2000, 39, 122-130.	1.8	85
9	Computation of phase and chemical equilibrium: Part II. Phase-splitting. <i>AIChE Journal</i> , 1979, 25, 999-1006.	1.8	66
10	Nonlinear analysis in process design. <i>AIChE Journal</i> , 1991, 37, 1-38.	1.8	61
11	Real-time risk analysis of safety systems. <i>Computers and Chemical Engineering</i> , 2008, 32, 827-840.	2.0	59
12	Commercial-Scale Biodiesel Production from Algae. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 5311-5324.	1.8	59
13	Dynamic risk analysis using alarm databases to improve process safety and product quality: Part II—Bayesian analysis. <i>AIChE Journal</i> , 2012, 58, 826-841.	1.8	53
14	Nonlinear analysis in process design. Why overdesign to avoid complex nonlinearities?. <i>Industrial & Engineering Chemistry Research</i> , 1990, 29, 805-818.	1.8	48
15	Synthesis of utility systems integrated with chemical processes. <i>Industrial & Engineering Chemistry Research</i> , 1989, 28, 84-93.	1.8	41
16	Incidents Investigation and Dynamic Analysis of Large Alarm Databases in Chemical Plants: A Fluidized-Catalytic-Cracking Unit Case Study. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 8062-8079.	1.8	40
17	Semicontinuous, middle-vessel distillation of ternary mixtures. <i>AIChE Journal</i> , 2000, 46, 1508-1520.	1.8	39
18	Dynamic risk analysis using alarm databases to improve process safety and product quality: Part I—Data compaction. <i>AIChE Journal</i> , 2012, 58, 812-825.	1.8	39

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19	Multiphase equilibria of reactive systems. Fluid Phase Equilibria, 1996, 123, 283-303.	1.4	38
20	Model-predictive control of the Czochralski crystallization process. Part I. Conduction-dominated melt. Journal of Crystal Growth, 1997, 178, 593-611.	0.7	36
21	Design and control of a process to extract .beta.-carotene with supercritical carbon dioxide. Biotechnology Progress, 1990, 6, 82-91.	1.3	32
22	Bifurcation analysis in heterogeneous azeotropic distillation. AIChE Journal, 1989, 35, 1457-1464.	1.8	31
23	Semicontinuous distillation for ethyl lactate production. AIChE Journal, 2008, 54, 2539-2552.	1.8	31
24	Exergy efficiency of plant photosynthesis. Chemical Engineering Science, 2015, 130, 151-171.	1.9	31
25	Perspectives on chemical product and process design. Computers and Chemical Engineering, 2009, 33, 930-935.	2.0	29
26	Dynamic analysis of heterogeneous azeotropic distillation. AIChE Journal, 1992, 38, 1229-1242.	1.8	26
27	Semicontinuous, middle-vessel, extractive distillation. Computers and Chemical Engineering, 2000, 24, 879-885.	2.0	26
28	Coarse-grained lattice kinetic Monte Carlo simulation of systems of strongly interacting particles. Journal of Chemical Physics, 2008, 128, 194705.	1.2	26
29	System structures for process simulation. AIChE Journal, 1977, 23, 658-666.	1.8	25
30	Computation of phase and chemical equilibrium, part IV: Approach to chemical equilibrium. AIChE Journal, 1981, 27, 466-471.	1.8	25
31	Practical optimization of complex chemical processes with tight constraints. Computers and Chemical Engineering, 2008, 32, 2099-2112.	2.0	25
32	Model-predictive safety system for proactive detection of operation hazards. AIChE Journal, 2016, 62, 2024-2042.	1.8	25
33	Phase equilibria of triolein to biodiesel reactor systems. Fluid Phase Equilibria, 2016, 409, 171-192.	1.4	25
34	Computation of phase and chemical equilibrium: Part III. Electrolytic solutions. AIChE Journal, 1979, 25, 1006-1015.	1.8	24
35	Design of Optimal Water-Using Networks with Internal Water Mains. Industrial & Engineering Chemistry Research, 2006, 45, 8413-8420.	1.8	24
36	Simulation of three-phase distillation towers. Computers and Chemical Engineering, 1981, 5, 7-20.	2.0	22

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37	Semicontinuous reactive extraction and reactive distillation. <i>Chemical Engineering Research and Design</i> , 2009, 87, 245-262.	2.7	22
38	Adaptive semiimplicit Runge-Kutta method for solution of stiff ordinary differential equations. <i>Industrial & Engineering Chemistry Fundamentals</i> , 1981, 20, 255-266.	0.7	21
39	Game theoretic approach to multiobjective designs: Focus on inherent safety. <i>AIChE Journal</i> , 2006, 52, 228-246.	1.8	21
40	Assessment of catastrophe risk and potential losses in industry. <i>Computers and Chemical Engineering</i> , 2012, 47, 85-96.	2.0	21
41	Maximum likelihood maximum entropy constrained probability density function estimation for prediction of rare events. <i>AIChE Journal</i> , 2014, 60, 1013-1026.	1.8	19
42	Distillate Bottoms Control of Middle-Vessel Distillation Columns. <i>Industrial & Engineering Chemistry Research</i> , 2000, 39, 1840-1849.	1.8	18
43	Model-Based Controller Design for Unstable, Non-Minimum-Phase, Nonlinear Processes. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 2758-2768.	1.8	18
44	Design heuristics for semicontinuous separation processes with chemical reactions. <i>Chemical Engineering Research and Design</i> , 2009, 87, 263-270.	2.7	18
45	Model-predictive control of the Czocharski crystallization process. Part II. Reduced-order convection model. <i>Journal of Crystal Growth</i> , 1997, 178, 612-633.	0.7	17
46	Continuous-Time, Nonlinear Feedback Control of Stable Processes. <i>Industrial & Engineering Chemistry Research</i> , 2001, 40, 2069-2078.	1.8	17
47	Semicontinuous Distillation with Chemical Reaction in a Middle Vessel. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 5548-5560.	1.8	17
48	Vapor-liquid and liquid-liquid equilibria for the system sec-butyl-alcohol-di-sec-butyl ether-water. <i>Journal of Chemical & Engineering Data</i> , 1988, 33, 16-20.	1.0	16
49	Nonlinear Controller Design for Input-Constrained, Multivariable Processes. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 3735-3744.	1.8	15
50	Teaching chemical engineering product design. <i>Current Opinion in Chemical Engineering</i> , 2012, 1, 472-475.	3.8	15
51	Confined jet mixing in the entrance of a tubular reactor. <i>AIChE Journal</i> , 1971, 17, 704-712.	1.8	14
52	Verification of Controllers in the Presence of Uncertainty: Application to Styrene Polymerization. <i>Industrial & Engineering Chemistry Research</i> , 1996, 35, 2277-2287.	1.8	14
53	A non-parametric Monte Carlo technique for controller verification. <i>Automatica</i> , 1997, 33, 901-906.	3.0	14
54	Azeotropic distillation with an internal decanter. <i>Computers and Chemical Engineering</i> , 2000, 24, 2435-2446.	2.0	14

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55	Nonlinear feedback control of multivariable non-minimum-phase processes. <i>Journal of Process Control</i> , 2002, 12, 667-686.	1.7	14
56	A new technique for precedence-ordering chemical process equation sets. <i>AICHE Journal</i> , 1973, 19, 934-942.	1.8	13
57	Estimation of Complete Discrete Multivariate Probability Distributions from Scarce Data with Application to Risk Assessment and Fault Detection. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 7538-7547.	1.8	13
58	Analysis of management actions, human behavior, and process reliability in chemical plants. I. impact of management actions. <i>Process Safety Progress</i> , 2008, 27, 7-14.	0.4	12
59	An energy-limited model of algal biofuel production: Toward the next generation of advanced biofuels. <i>AICHE Journal</i> , 2013, 59, 4641-4654.	1.8	12
60	Chemical Process Simulation for Dynamic Risk Analysis: A Steam-Methane Reformer Case Study. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 4347-4359.	1.8	12
61	Omega-3 fatty acids from algae produced biodiesel. <i>Algal Research</i> , 2020, 51, 102047.	2.4	12
62	CO ₂ process intensification of algae oil extraction to biodiesel. <i>AICHE Journal</i> , 2021, 67, .	1.8	12
63	Coal pretreatment extensions of flowtran to model solids-handling equipment. <i>Computers and Chemical Engineering</i> , 1980, 4, 49-61.	2.0	10
64	Helical and Lemniscate Tubular Reactors. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 8842-8850.	1.8	10
65	Analysis of management actions, human behavior, and process reliability in chemical plants. II. Near-miss management system selection. <i>Process Safety Progress</i> , 2008, 27, 139-144.	0.4	9
66	Effect of retrograde solubility on the design optimization of supercritical extraction processes. <i>Industrial & Engineering Chemistry Research</i> , 1989, 28, 1497-1503.	1.8	8
67	Chemical reaction equilibrium analysis: Theory and algorithms by William R. Smith and Ronald W. Missen, 364 pp., John Wiley, 1983, \$42.95. <i>AICHE Journal</i> , 1985, 31, 176-176.	1.8	7
68	Understanding rare safety and reliability events using transition path sampling. <i>Computers and Chemical Engineering</i> , 2018, 108, 74-88.	2.0	7
69	Supercritical CO ₂ Transesterification of Triolein to Methyl-Oleate in a Batch Reactor: Experimental and Simulation Results. <i>Processes</i> , 2019, 7, 16.	1.3	7
70	Model-predictive safety optimal actions to detect and handle process operation hazards. <i>AICHE Journal</i> , 2020, 66, e16932.	1.8	7
71	Improving Process Safety and Product Quality using Large Databases. <i>Computer Aided Chemical Engineering</i> , 2010, 28, 175-180.	0.3	6
72	Improved predictions of alarm and safety system performance through process and operator response-time modeling. <i>AICHE Journal</i> , 2016, 62, 3461-3472.	1.8	6

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73	Real-time, nonlinear control of a constrained, nonminimum-phase process. <i>AICHE Journal</i> , 2002, 48, 2247-2254.	1.8	4
74	Bifurcation control of high-dimensional nonlinear chemical processes using an extended washout-filter algorithm. <i>Computers and Chemical Engineering</i> , 2016, 84, 458-481.	2.0	4
75	Computer simulation of potassium-steam combined-cycle, electrical power plants. <i>Computers and Chemical Engineering</i> , 1977, 1, 161-169.	2.0	3
76	A general method for spatially coarse-graining Metropolis Monte Carlo simulations onto a lattice. <i>Journal of Chemical Physics</i> , 2013, 138, 114104.	1.2	3
77	Model-predictive safety: A new evolution in functional safety. , 2020, , 283-321.		3
78	Differential-geometric model-based control (DGMBC): A software package for controller design. <i>Computers and Chemical Engineering</i> , 2008, 32, 1569-1588.	2.0	2
79	Design for Process Safety – A Perspective. <i>Computer Aided Chemical Engineering</i> , 2014, 34, 795-800.	0.3	2
80	An efficient algorithm for community detection in complex weighted networks. <i>AICHE Journal</i> , 2021, 67, e17205.	1.8	2
81	Understanding rare safety and reliability events using forward-flux sampling. <i>Computers and Chemical Engineering</i> , 2021, 153, 107387.	2.0	2
82	Computer AIDS for chemical engineering education: An assessment of CACHE-1971-1992. <i>Computer Applications in Engineering Education</i> , 1992, 1, 3-10.	2.2	1
83	Finite elements for near-singular systems – an overview. <i>Computers and Chemical Engineering</i> , 1992, 16, S43-S54.	2.0	1
84	An interactive approach to teaching steady-state simulation of chemical processes. <i>Computer Applications in Engineering Education</i> , 1996, 4, 261-268.	2.2	1
85	PSE and business decision-making in the chemical engineering curriculum. <i>Computer Aided Chemical Engineering</i> , 2003, 15, 74-87.	0.3	1
86	Computation for process engineers, G. L. Wells and P. M. Robson, Holsted Press, 192 pages.\$12.75. <i>AICHE Journal</i> , 1974, 20, 622-623.	1.8	0
87	Computation of equilibrium in electrolyte solutions. <i>Computers and Chemical Engineering</i> , 1979, 3, 595.	2.0	0
88	Integration of combustion reaction systems. <i>Computers and Chemical Engineering</i> , 1984, 8, 345-354.	2.0	0
89	In transition. <i>AICHE Journal</i> , 1991, 37, 803-803.	1.8	0
90	A synthesis procedure for the design of semicontinuous reactive distillation for specialty chemicals. <i>Computer Aided Chemical Engineering</i> , 2006, 21, 949-954.	0.3	0

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91	Epitaxial Silicon Wafers using Plasma-Enhanced, Chemical-Vapor-Deposition. Computer Aided Chemical Engineering, 2007, 23, 289-309.	0.3	0
92	A Special Tribute to Honor Stuart Churchill on the Occasion of His 90th Birthday. Industrial & Engineering Chemistry Research, 2011, 50, 8803-8805.	1.8	0
93	International Programming Committee. Computer Aided Chemical Engineering, 2014, 34, xvi-xvii.	0.3	0