

# Michael Menzinger

## List of Publications by Year in descending order

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60  
papers

1,689  
citations

331670

21  
h-index

289244

40  
g-index

60  
all docs

60  
docs citations

60  
times ranked

734  
citing authors

#	ARTICLE	IF	CITATIONS
1	Chemical instability induced by a differential flow. <i>Physical Review Letters</i> , 1992, 69, 1193-1196.	7.8	200
2	Self-organization induced by the differential flow of activator and inhibitor. <i>Physical Review Letters</i> , 1993, 70, 778-781.	7.8	156
3	High Intensity, Low Energy Spread Ion Source for Chemical Accelerators. <i>Review of Scientific Instruments</i> , 1969, 40, 102-105.	1.3	144
4	Turing instabilities in general systems. <i>Journal of Mathematical Biology</i> , 2000, 41, 493-512.	1.9	122
5	Interaction of Turing and Hopf bifurcations in chemical systems. <i>Physical Review A</i> , 1992, 46, 6315-6322.	2.5	82
6	Flow-distributed oscillations: Stationary chemical waves in a reacting flow. <i>Physical Review E</i> , 1999, 60, R3471-R3474.	2.1	72
7	Non-Turing stationary patterns in flow-distributed oscillators with general diffusion and flow rates. <i>Physical Review E</i> , 2000, 62, 113-119.	2.1	55
8	Segmentation and Somitogenesis Derived from Phase Dynamics in Growing Oscillatory Media. <i>Journal of Theoretical Biology</i> , 2000, 207, 473-493.	1.7	54
9	Parameter space analysis, pattern sensitivity and model comparison for Turing and stationary flow-distributed waves (FDS). <i>Physica D: Nonlinear Phenomena</i> , 2001, 160, 79-102.	2.8	54
10	Molecular beam chemiluminescence. VII. Enhancement of $\text{Ba} + \text{N}_2\text{O} \rightarrow \text{BaO}^* + \text{N}_2\text{O}$ cross section through $\text{N}_2\text{O}$ bending vibration: Evidence for electron transfer. <i>Journal of Chemical Physics</i> , 1975, 63, 4557-4559.	3.0	45
11	Chemical waves in open flows of active media: Their relevance to axial segmentation in biology. <i>Faraday Discussions</i> , 2002, 120, 295-312.	3.2	44
12	Mercury Drop "Attacks" an Oxidant Crystal. <i>Journal of Physical Chemistry B</i> , 2000, 104, 3589-3593.	2.6	40
13	Electronic Chemiluminescence in Gases. <i>Advances in Chemical Physics</i> , 2007, , 1-61.	0.3	38
14	Beam Studies of the Energy Dependence of $\text{H} + \text{C}_6\text{H}_{12}$ Atom Reactions with Cyclohexane. <i>Journal of Chemical Physics</i> , 1969, 50, 2991-3004.	3.0	37
15	Steady-State Multiplicity and Superadiabatic Extinction Waves in the Oxidation of $\text{CO}/\text{H}_2$ Mixtures over a $\text{Pt}/\text{Al}_2\text{O}_3$ -Coated Monolith. <i>Industrial &amp; Engineering Chemistry Research</i> , 2003, 42, 37-45.	3.7	32
16	Slow passage through a supercritical Hopf bifurcation: Time-delayed response in the Belousov-Zhabotinsky reaction in a batch reactor. <i>Journal of Chemical Physics</i> , 1996, 105, 10905-10910.	3.0	31
17	Control of chemical pattern formation by a clock-and-wavefront type mechanism. <i>Biophysical Chemistry</i> , 2004, 110, 231-238.	2.8	26
18	Molecular beam chemiluminescence. V. Reactivities of $\text{NO}(^2\text{P}_{1/2})$ and $\text{NO}(^2\text{P}_{3/2})$ fine structure components in the $\text{NO} + \text{O}_3 \rightarrow \text{NO}^* + \text{O}_2$ reaction. <i>Journal of Chemical Physics</i> , 1975, 62, 1987-1988.	3.0	25

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19	Controlled pattern formation in the CDIMA reaction with a moving boundary of illumination. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 1315-1319.	2.8	25
20	Nonlinear Dynamics of the BZ Reaction: A Simple Experiment that Illustrates Limit Cycles, Chaos, Bifurcations, and Noise. <i>Journal of Chemical Education</i> , 1996, 73, 868.	2.3	24
21	Stirring Effects and Phase-Dependent Inhomogeneity in Chemical Oscillations: The Belousov-Zhabotinsky Reaction in a CSTR. <i>Journal of Physical Chemistry A</i> , 1997, 101, 2304-2309.	2.5	24
22	Differential flow instability in dynamical systems without an unstable (activator) subsystem. <i>Physical Review Letters</i> , 1994, 72, 2017-2020.	7.8	23
23	Electronic energy partitioning in reactions occurring on more than one potential energy surface: Metastable Mg(3P) atoms with halogen molecules. <i>Journal of Chemical Physics</i> , 1983, 78, 5612-5620.	3.0	21
24	Experiments on Flow-Distributed Oscillations in the Belousov-Zhabotinsky Reaction. <i>Journal of Physical Chemistry A</i> , 2002, 106, 4897-4903.	2.5	21
25	An ab initio study of the reaction $\text{Be}(3P) + \text{H}_2(1^1g^+) \rightarrow \text{BeH}(2^1\Sigma^+) + \text{H}(2S)$ . <i>Journal of Chemical Physics</i> , 1983, 78, 4592-4596.	3.0	19
26	Pulsating wave propagation in reactive flows: Flow-distributed oscillations. <i>Physical Review E</i> , 2000, 61, 3334-3338.	2.1	19
27	Temperature excursions in packed bed reactors with an axial variation of catalyst activity. <i>Catalysis Today</i> , 2001, 69, 137-146.	4.4	19
28	On the dynamical content of excitation functions: Simple linearization procedures. <i>Chemical Physics</i> , 1977, 22, 273-280.	1.9	18
29	Hysteresis and Extinction Waves in Catalytic CO Oxidation Caused by Reactant Concentration Perturbations in a Packed-Bed Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2003, 42, 1662-1673.	3.7	18
30	General theory of nonlinear flow-distributed oscillations. <i>Physical Review E</i> , 2003, 68, 066122.	2.1	15
31	Reply to "Comment on 'Flow-distributed oscillations: Stationary chemical waves in a reacting flow'" . <i>Physical Review E</i> , 2000, 62, 2994-2995.	2.1	14
32	Beam studies of the energy dependence of the reactions of tritium atoms with n-hexane, cyclopentane, n-butane, and 1-chlorobutane. <i>Journal of Chemical Physics</i> , 1973, 58, 1741-1752.	3.0	13
33	Propagation of Excitation Pulses and Autocatalytic Fronts in Packed-Bed Reactors. <i>Journal of Physical Chemistry B</i> , 2002, 106, 3751-3758.	2.6	13
34	Pattern formation by boundary forcing in convectively unstable, oscillatory media with and without differential transport. <i>Physical Review E</i> , 2005, 72, 026210.	2.1	13
35	Differential Flow Instability in Tubular Flow Reactor: Its Convective Nature. <i>The Journal of Physical Chemistry</i> , 1996, 100, 15810-15814.	2.9	12
36	A general mechanism for "inexact" phase differences in "reaction-diffusion-advection" systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002, 304, 149-156.	2.1	12

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37	Estimating spectral properties of the thermal instability in packed-bed reactors. <i>Chemical Engineering Science</i> , 2008, 63, 1480-1489.	3.8	10
38	The Differential Flow Instabilities. , 1995, , 365-397.		10
39	Temperature response to reactant concentration perturbations in a packed-bed reactor. <i>Canadian Journal of Chemical Engineering</i> , 2001, 79, 823-827.	1.7	8
40	Energy dependence of the reactions of atomic tritium with 1-chlorobutane. <i>Journal of Chemical Physics</i> , 1974, 60, 2568-2569.	3.0	7
41	Control of activator-inhibitor systems by differential transport. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1996, 216, 262-268.	2.1	6
42	Stirring Effect on Bistability in a CSTR. 1. Experiments and Simulations for the AsO <sub>3</sub> -IO <sub>3</sub> -Reaction. <i>Journal of Physical Chemistry A</i> , 1999, 103, 10859-10865.	2.5	6
43	Stabilization of stationary excitation pulses in an open flow without long-range inhibition. <i>Physical Review E</i> , 2002, 65, 046202.	2.1	6
44	Flow-distributed oscillation, flow-velocity modulation, and resonance. <i>Physical Review E</i> , 2005, 72, 027202.	2.1	6
45	Recoil-tritium reactions in the solid phase: absolute yields and phase effects. <i>The Journal of Physical Chemistry</i> , 1968, 72, 1789-1792.	2.9	5
46	Stirring Effect on Bistability in a CSTR. 2. Theoretical Analysis of the Coalescence-Redispersion Model for One-Variable Systems. <i>Journal of Physical Chemistry A</i> , 1999, 103, 10866-10873.	2.5	5
47	Harmonic resonant excitation of flow-distributed oscillation waves and Turing patterns driven at a growing boundary. <i>Physical Review E</i> , 2009, 80, 026209.	2.1	5
48	Selection of flow-distributed oscillation and Turing patterns by boundary forcing in a linearly growing, oscillating medium. <i>Physical Review E</i> , 2009, 80, 026208.	2.1	5
49	The Vibrational Spectrum of Tetramethyldioxetane. <i>Spectroscopy Letters</i> , 1983, 16, 945-951.	1.0	4
50	Dynamics of analog-to-digital frequency transduction by excitable systems: Sensory receptors. <i>Journal of Chemical Physics</i> , 1993, 98, 9155-9166.	3.0	4
51	Amplification of Periodic Temperature Disturbances in a Packed-Bed Reactor: CO Oxidation over a CuO/Al <sub>2</sub> O <sub>3</sub> Catalyst. <i>Canadian Journal of Chemical Engineering</i> , 2003, 81, 1215-1221.	1.7	4
52	Numerical Investigation of Resonance Behaviour of a Tubular Packed-Bed Reactor with Non-Uniform Activity. <i>Canadian Journal of Chemical Engineering</i> , 2004, 82, 387-391.	1.7	4
53	Common dynamics of the differential-flow-induced chemical instability and the multimode instability in a laser with a saturable absorber. <i>Physical Review A</i> , 1993, 48, 1683-1686.	2.5	3
54	Differential flow instability in the Ginzburg-Landau and Swift-Hohenberg approximations. <i>Physica D: Nonlinear Phenomena</i> , 1996, 95, 306-318.	2.8	3

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55	The parameter domain of convective instability of the adiabatic packed-bed reactor. Canadian Journal of Chemical Engineering, 2015, 93, 1975-1989.	1.7	3
56	Reply to Comments on "Stirring Effects and Phase-Dependent Inhomogeneity in Chemical Oscillations: The Belousov-Zhabotinsky Reaction in a CSTR". Journal of Physical Chemistry A, 1997, 101, 8966-8966.	2.5	2
57	Inhomogeneities of CSTR on a Macroscale Due to Spatial Dependence of Micromixing Time: The BZ Reaction. Journal of Physical Chemistry A, 1998, 102, 188-191.	2.5	2
58	Blocking and transmission of traveling flow-distributed-oscillation waves in an absolutely unstable flowing medium. Physical Review E, 2012, 86, 026208.	2.1	1
59	Isotope effect on the location of variational transition states: The hydrogen exchange reaction. International Journal of Chemical Kinetics, 1986, 18, 1079-1086.	1.6	0
60	Reply to the "Comment on "Controlled pattern formation in the CDIMA reaction with a moving boundary of illumination" by J. H. Merkin, Phys. Chem. Chem. Phys., 2003, 5, 430. Physical Chemistry Chemical Physics, 2003, 5, 431-431.	2.8	0