Miklos Orban

List of Publications by Year
in descending order

72 papers	2,674 citations	172207 29 h-index	189595 50 g-index
72 all docs	72 docs citations	72 times ranked	795 citing authors

#	Article	IF	Citations
1	Recent advances in the temporal and spatiotemporal dynamics induced by bromateâ€“sulfite-based pH-oscillators. Reaction Kinetics, Mechanisms and Catalysis, 2022, 135, 1299-1311.	0.8	1
2	Chemical Oscillations With Sodium Perborate as Oxidant. Frontiers in Chemistry, 2020, 8, 561788.	1.8	4
3	Periodic changes in the oxidation states of the center ion in the cobalt-histidine complex induced by the BrO3âˆ’ â€“ SO32âˆ’ pH-oscillator. Chaos, 2018, 28, 053114.	1.0	2
4	pH-Regulated Chemical Oscillators. Accounts of Chemical Research, 2015, 48, 593-601.	7.6	73
5	pH-oscillations in the bromateâ€“sulfite reaction in semibatch and in gel-fed batch reactors. Chaos, 2015, 25, 064602.	1.0	12
6	Adsorptionâ€“desorption oscillations of nanoparticles on a honeycomb-patterned pH-responsive hydrogel surface in a closed reaction system. Physical Chemistry Chemical Physics, 2014, 16, 25296-25305.	1.3	7
7	Generation of spatiotemporal calcium patterns by coupling a pH-oscillator to a complexation equilibrium. Chemical Communications, 2014, 50, 4158-4160.	2.2	12
8	Periodic Changes in the Distribution of Species Observed in the Ni²⁺â€“Histidine Equilibrium Coupled to the BrO₃^{â€“}â€“SO₃^{2â€“} pH Oscillator. Journal of Physical Chemistry A, 2014, 118, 6749-6756.	1.1	5
9	Oscillations in the Permanganate Oxidation of Glycine in a Stirred Flow Reactor. Journal of Physical Chemistry A, 2013, 117, 9023-9027.	1.1	4
10	Some General Features in the Autocatalytic Reaction between Sulfite Ion and Different Oxidants. International Journal of Chemical Kinetics, 2013, 45, 462-468.	1.0	9
11	Modelling pH oscillators in open, semi-batch and batch reactors. Reaction Kinetics, Mechanisms and Catalysis, 2012, 106, 257-266.	0.8	7
12	Generation of pH-Oscillations in Closed Chemical Systems: Method and Applications. Journal of the American Chemical Society, 2011, 133, 7174-7179.	6.6	35
13	Oscillatory concentration pulses of some divalent metal ions induced by a redox oscillator. Physical Chemistry Chemical Physics, 2010, 12, 1248-1252.	1.3	11
14	Oscillations in the Concentration of Fluoride Ions Induced by a pH Oscillator. Journal of Physical Chemistry A, 2008, 112, 4271-4276.	1.1	16
15	Chemical origin of the sustained-like pattern formation observed in the bromate â€” Dual substrate â€” Dual catalyst oscillatory batch system. Reaction Kinetics and Catalysis Letters, 2007, 90, 405-411.	0.6	2
16	Periodic Pulses of Calcium Ions in a Chemical System. Journal of Physical Chemistry A, 2006, 110, 7588-7592.	1.1	22
17	New Experimental Data and Mechanistic Studies on the Bromateâˆ’Dual Substrateâˆ’Dual Catalyst Batch Oscillator. Journal of Physical Chemistry A, 2006, 110, 6067-6072.	1.1	7
18	Systematic design of chemical oscillators using complexation and precipitation equilibria. Nature, 2005, 433, 139-142.	13.7	102

#	Article	IF	Citations
19	New Heterogeneous Chemical Oscillators:Â Reduction of Manganese Species by Hypophosphite on a Pt Surface. Journal of Physical Chemistry B, 2004, 108, 7352-7358.	1.2	3
20	Dynamics and Mechanism of Bromate Oscillators with 1,4-Cyclohexanedione. Journal of Physical Chemistry A, 2003, 107, 10074-10081.	1.1	34
21	Mechanistic studies on the bromateâ€“1,4-cyclohexanedioneâ€“ferroin oscillatory system. Physical Chemistry Chemical Physics, 2002, 4, 1271-1275.	1.3	16
22	A new chemical system for studying pattern formation: Bromateâ€“hypophosphiteâ€“acetoneâ€“dual catalyst. Faraday Discussions, 2002, 120, 11-19.	1.6	18
23	Mechanistic studies of oscillatory copper(II) catalyzed oxidation reactions of sulfur compounds. Chemical Engineering Science, 2000, 55, 267-273.	1.9	30
24	Pattern Formation during Polymerization of Acrylamide in the Presence of Sulfide Ions. Journal of Physical Chemistry B, 1999, 103, 36-40.	1.2	23
25	On the nature of patterns arising during polymerization of acrylamide in the presence of the methylene blue-sulfide-oxygen oscillating reaction. Chemical Physics Letters, 1998, 295, 70-74.	1.2	11
26	New Indicators for Visualizing Pattern Formation in Uncatalyzed Bromate Oscillatory Systems. Journal of the American Chemical Society, 1998, 120, 1146-1150.	6.6	24
27	Photosensitive, Bubble-free, Bromateâ^'1,4-Cyclohexanedione Oscillating Reactions. Illumination Control of Pattern Formation. Journal of Physical Chemistry A, 1997, 101, 6827-6829.	1.1	40
28	Reply to â€œMechanism of the Oscillatory Bromate Oxidation of Sulfite and Ferrocyanide in a CSTRâ€. The Journal of Physical Chemistry, 1996, 100, 16443-16443.	2.9	5
29	Bromateâ^'1,4-Cyclohexanedioneâ^'Ferroin Gas-Free Oscillating Reaction. 1. Basic Features and Crossing Wave Patterns in a Reactionâ^'Diffusion System without Gel. The Journal of Physical Chemistry, 1996, 100, 5393-5397.	2.9	62
30	Model for the oscillatory reaction between hydrogen peroxide and thiosulfate catalysed by copper(II) ions. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 2851-2855.	1.7	34
31	Oscillatory Chemical Reactions in Heterogeneous Systems:â€‰ Oxidation of Hydrogen on Platinum Surface by Strong Oxidants in Aqueous Solutions. The Journal of Physical Chemistry, 1996, 100, 19141-19147.	2.9	7
32	A New Bromite Oscillator. Large-Amplitude pH Oscillations in the Bromite-Thiosulfate-Phenol Flow System. The Journal of Physical Chemistry, 1995, 99, 2358-2362.	2.9	7
33	Simple and Complex pH Oscillations and Bistability in the Phenol-Perturbed Bromite-Hydroxylamine Reaction. The Journal of Physical Chemistry, 1994, 98, 2930-2935.	2.9	8
34	General model for the chlorite ion based chemical oscillators. The Journal of Physical Chemistry, 1993, 97, 5935-5939.	2.9	52
35	Systematic design of chemical oscillators. 77. A model for the pH-regulated oscillatory reaction between hydrogen peroxide and sulfide ion. The Journal of Physical Chemistry, 1992, 96, 5414-5419.	2.9	48
36	A new type of oxyhalogen oscillator: the bromite-iodide reaction in a continuous flow reactor. Journal of the American Chemical Society, 1992, 114, 1252-1256.	6.6	11

#	Article	IF	Citations
37	Systematic design of chemical oscillators. 74. Newly designed permanganate-reductant chemical oscillators. Journal of the American Chemical Society, 1991, 113, 7484-7489.	6.6	20
38	Systematic design of chemical oscillators. 72. A transition-metal oscillator: oscillatory oxidation of manganese(II) by periodate in a CSTR. Journal of the American Chemical Society, 1991, 113, 1978-1982.	6.6	24
39	Cu(II)-catalyzed oscillatory chemical reactions. Reaction Kinetics and Catalysis Letters, 1990, 42, 343-353.	0.6	17
40	Systematic design of chemical oscillators. 62. The minimal permanganate oscillator and some derivatives: oscillatory oxidation of S2O32-, SO32-, and S2- by permanganate in a CSTR. Journal of the American Chemical Society, 1990, 112, 1812-1817.	6.6	32
41	Systematic design of chemical oscillators. 64. Design of pH-regulated oscillators. Accounts of Chemical Research, 1990, 23, 258-263.	7.6	120
42	Systematic design of chemical oscillators. 45. Kinetics and mechanism of the oscillatory bromate-sulfite-ferrocyanide reaction. The Journal of Physical Chemistry, 1989, 93, 2722-2727.	2.9	91
43	Systematic design of chemical oscillators. 48. Chemical oscillators in group VIA: the copper(II)-catalyzed reaction between thiosulfate and peroxodisulfate ions. Journal of the American Chemical Society, 1989, 111, 2891-2896.	6.6	20
44	Mechanistic study of oscillations and bistability in the copper(II)-catalyzed reaction between hydrogen peroxide and potassium thiocyanate. Journal of the American Chemical Society, 1989, 111, 4541-4548.	6.6	74
45	Systematic design of chemical oscillators. 59. Minimal permanganate oscillator: the Guyard reaction in a CSTR. Journal of the American Chemical Society, 1989, 111, 8543-8544.	6.6	22
46	Systematic design of chemical oscillators. 40. A mechanism for dynamical behavior in the Landolt reaction with ferrocyanide. Journal of the American Chemical Society, 1987, 109, 4876-4880.	6.6	36
47	Formation of hydrogen-bonded complexes between phenol and some heterocyclic bases in carbon tetrachloride. Journal of the Chemical Society Perkin Transactions II, 1987, , 1815-1817.	0.9	10
48	Systematic design of chemical oscillators. 39. Chemical oscillators in group VIA: the copper(II)-catalyzed reaction between hydrogen peroxide and thiosulfate ion. Journal of the American Chemical Society, 1987, 109, 101-106.	6.6	68
49	Oscillations and bistability in the copper(II)-catalyzed reaction between hydrogen peroxide and potassium thiocyanate. Journal of the American Chemical Society, 1986, 108, 6893-6898.	6.6	80
50	A new iodate oscillator: the Landolt reaction with ferrocyanide in a CSTR. Journal of the American Chemical Society, 1986, 108, 2826-2830.	6.6	103
51	Systematic design of chemical oscillators. 26. A new halogen-free chemical oscillator: the reaction between sulfide ion and hydrogen peroxide in a CSTR. Journal of the American Chemical Society, 1985, 107, 2302-2305.	6.6	64
52	Oscillating Chemical Reactions. Scientific American, 1983, 248, 112-123.	1.0	134
53	Systematic design of chemical oscillators. 15. A new type of bromate oscillator: the bromate-iodide reaction in a stirred-flow reactor. Journal of the American Chemical Society, 1983, 105, 2641-2643.	6.6	29
54	Systematic design of chemical oscillators. Part 14. Inorganic bromate oscillators. Bromate-chlorite-reductant. The Journal of Physical Chemistry, 1983, 87, 3212-3219.	2.9	13

#	Article	IF	Citations
55	Systematic design of chemical oscillators. Part 16. Inorganic bromate oscillators. Bromate-manganous-reductant. The Journal of Physical Chemistry, 1983, 87, 3725-3728.	2.9	25
56	Systematic design of chemical oscillators. Part 13. Complex periodic and aperiodic oscillation in the chlorite-thiosulfate reaction. The Journal of Physical Chemistry, 1982, 86, 3907-3910.	2.9	107
57	Systematic design of chemical oscillators. Part 8. Batch oscillations and spatial wave patterns in chlorite oscillating systems. The Journal of Physical Chemistry, 1982, 86, 170-171.	2.9	147
58	Systematic design of chemical oscillators. Part 7. An iodine-free chlorite-based oscillator. The chlorite-thiosulfate reaction in a continuous flow stirred tank reactor. The Journal of Physical Chemistry, 1982, 86, 431-433.	2.9	54
59	Systematic design of chemical oscillators. 5. Bistability and oscillations in the autocatalytic chlorite-iodide reaction in a stirred-flow reactor. Journal of the American Chemical Society, 1982, 104, 504-509.	6.6	75
60	Systematic design of chemical oscillators. Part 9. Kinetics and mechanism of the oxidation of iodine by chlorite ion. Inorganic Chemistry, 1982, 21, 2192-2196.	1.9	19
61	Systematic design of chemical oscillators. 11. Chlorite oscillators: new experimental examples, tristability, and preliminary classification. Journal of the American Chemical Society, 1982, 104, 5911-5918.	6.6	52
62	Systematic design of chemical oscillators. 10. Minimal bromate oscillator: bromate-bromide-catalyst. Journal of the American Chemical Society, 1982, 104, 2657-2658.	6.6	67
63	Systematic design of chemical oscillators. 12. Bistability in the oxidation of iron(II) by nitric acid. Journal of the American Chemical Society, 1982, 104, 5918-5922.	6.6	34
64	Oscillations and bistability in hydrogen-platinum-oxyhalogen systems. Journal of the American Chemical Society, 1981, 103, 3723-3727.	6.6	19
65	New family of homogeneous chemical oscillators: chloriteâ€“iodateâ€“substrate. Nature, 1981, 292, 816-818.	13.7	28
66	A New Type of Chemical Oscillatior: Potential Oscillation and Bistability on a Platinum Electrode in some Aqueous Hydrogen-Halogen (ATE) Pumped Systems. Springer Series in Synergetics, 1981, , 197-200.	0.2	1
67	Chemical oscillations during the uncatalyzed reaction of aromatic compounds with bromate. 3. Effect of one-electron redox couples on uncatalyzed bromate oscillators. The Journal of Physical Chemistry, 1980, 84, 559-560.	2.9	27
68	Chemical oscillation during the uncatalyzed reaction of aromatic compounds with bromates. 4. Stationary and moving structures in uncatalyzed oscillatory chemical reactions. Journal of the American Chemical Society, 1980, 102, 4311-4314.	6.6	82
69	Chemical oscillations during the uncatalyzed reaction of aromatic compounds with bromate. 2. A plausible skeleton mechanism. The Journal of Physical Chemistry, 1979, 83, 3056-3057.	2.9	74
70	Novel type of oscillatory chemical reactions. Reaction Kinetics and Catalysis Letters, 1978, 8, 273-276.	0.6	16
71	Chemical oscillations during the uncatalyzed reaction of aromatic compounds with bromate. 1. Search for chemical oscillators. The Journal of Physical Chemistry, 1978, 82, 1672-1674.	2.9	114
72	Hydrogen-bonded complexes between pyridine and phenol in carbon tetrachloride solutions. Journal of the Chemical Society Faraday Transactions I, 1977, 73, 1326.	1.0	12