Miklos Orban

List of Publications by Year in Descending Order

72 papers	2,364 citations	28 h-index	47 g-index
72 ext. papers	2,478 ext. citations	11 avg, IF	4.42 L-index

#	Paper	IF	Citations
72	Chemical Oscillations With Sodium Perborate as Oxidant. *Frontiers in Chemistry*, **2020**, 8, 561788	5	1
71	Periodic changes in the oxidation states of the center ion in the cobalt-histidine complex induced by the BrO - SO pH-oscillator. *Chaos*, **2018**, 28, 053114	3.3	1
70	pH-regulated chemical oscillators. *Accounts of Chemical Research*, **2015**, 48, 593-601	24.3	58
69	pH-oscillations in the bromate-sulfite reaction in semibatch and in gel-fed batch reactors. *Chaos*, **2015**, 25, 064602	3.3	11
68	Generation of spatiotemporal calcium patterns by coupling a pH-oscillator to a complexation equilibrium. *Chemical Communications*, **2014**, 50, 4158-60	5.8	9
67	Periodic changes in the distribution of species observed in the Ni(2+)-histidine equilibrium coupled to the BrO3(-)-SO3(2-) pH oscillator. *Journal of Physical Chemistry A*, **2014**, 118, 6749-56	2.8	4
66	Adsorption-desorption oscillations of nanoparticles on a honeycomb-patterned pH-responsive hydrogel surface in a closed reaction system. *Physical Chemistry Chemical Physics*, **2014**, 16, 25296-305	3.6	6
65	Oscillations in the permanganate oxidation of glycine in a stirred flow reactor. *Journal of Physical Chemistry A*, **2013**, 117, 9023-7	2.8	4
64	Some General Features in the Autocatalytic Reaction between Sulfite Ion and Different Oxidants. *International Journal of Chemical Kinetics*, **2013**, 45, 462-468	1.4	9
63	Modelling pH oscillators in open, semi-batch and batch reactors. *Reaction Kinetics, Mechanisms and Catalysis*, **2012**, 106, 257-266	1.6	6
62	Generation of pH-oscillations in closed chemical systems: method and applications. *Journal of the American Chemical Society*, **2011**, 133, 7174-9	16.4	32
61	Oscillatory concentration pulses of some divalent metal ions induced by a redox oscillator. *Physical Chemistry Chemical Physics*, **2010**, 12, 1248-52	3.6	10
60	Oscillations in the concentration of fluoride ions induced by a pH oscillator. *Journal of Physical Chemistry A*, **2008**, 112, 4271-6	2.8	12
59	Chemical origin of the sustained-like pattern formation observed in the bromate Dual substrate Dual catalyst oscillatory batch system. *Reaction Kinetics and Catalysis Letters*, **2007**, 90, 405-411		2
58	Periodic pulses of calcium ions in a chemical system. *Journal of Physical Chemistry A*, **2006**, 110, 7588-92	2.8	19
57	New experimental data and mechanistic studies on the bromate-dual substrate-dual catalyst batch oscillator. *Journal of Physical Chemistry A*, **2006**, 110, 6067-72	2.8	7
56	Systematic design of chemical oscillators using complexation and precipitation equilibria. *Nature*, **2005**, 433, 139-42	50.4	90

(1992-2004)

55	New Heterogeneous Chemical Oscillators: Reduction of Manganese Species by Hypophosphite on a Pt Surface. *Journal of Physical Chemistry B*, **2004**, 108, 7352-7358	3.4	3
54	Dynamics and Mechanism of Bromate Oscillators with 1,4-Cyclohexanedione. *Journal of Physical Chemistry A*, **2003**, 107, 10074-10081	2.8	33
53	Mechanistic studies on the bromate–1,4-cyclohexanedione–ferroin oscillatory system. *Physical Chemistry Chemical Physics*, **2002**, 4, 1271-1275	3.6	16
52	A new chemical system for studying pattern formation: Bromate–hypophosphite–acetone–dual catalyst. *Faraday Discussions*, **2002**, 120, 11-19	3.6	14
51	Mechanistic studies of oscillatory copper(II) catalyzed oxidation reactions of sulfur compounds. *Chemical Engineering Science*, **2000**, 55, 267-273	4.4	25
50	Pattern Formation during Polymerization of Acrylamide in the Presence of Sulfide Ions. *Journal of Physical Chemistry B*, **1999**, 103, 36-40	3.4	21
49	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	2.5	10
48	New Indicators for Visualizing Pattern Formation in Uncatalyzed Bromate Oscillatory Systems. *Journal of the American Chemical Society*, **1998**, 120, 1146-1150	16.4	18
47	Photosensitive, Bubble-free, Bromate–1,4-Cyclohexanedione Oscillating Reactions. Illumination Control of Pattern Formation. *Journal of Physical Chemistry A*, **1997**, 101, 6827-6829	2.8	38
46	Oscillatory Chemical Reactions in Heterogeneous Systems: Oxidation of Hydrogen on Platinum Surface by Strong Oxidants in Aqueous Solutions. *The Journal of Physical Chemistry*, **1996**, 100, 19141-19147		7
45	Reply to "Mechanism of the Oscillatory Bromate Oxidation of Sulfite and Ferrocyanide in a CSTR" *The Journal of Physical Chemistry*, **1996**, 100, 16443-16443		4
44	Bromate–1,4-Cyclohexanedione–Ferroin Gas-Free Oscillating Reaction. 1. Basic Features and Crossing Wave Patterns in a Reaction–Diffusion System without Gel. *The Journal of Physical Chemistry*, **1996**, 100, 5393-5397		56
43	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		30
42	A New Bromite Oscillator. Large-Amplitude pH Oscillations in the Bromite-Thiosulfate-Phenol Flow System. *The Journal of Physical Chemistry*, **1995**, 99, 2358-2362		6
41	Simple and Complex pH Oscillations and Bistability in the Phenol-Perturbed Bromite-Hydroxylamine Reaction. *The Journal of Physical Chemistry*, **1994**, 98, 2930-2935		5
40	General model for the chlorite ion based chemical oscillators. *The Journal of Physical Chemistry*, **1993**, 97, 5935-5939		46
39	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		42
38	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	16.4	9

37	Systematic design of chemical oscillators. 74. Newly designed permanganate-reductant chemical oscillators. *Journal of the American Chemical Society*, **1991**, 113, 7484-7489	16.4	17
36	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	16.4	21
35	Cu(II)-catalyzed oscillatory chemical reactions. *Reaction Kinetics and Catalysis Letters*, **1990**, 42, 343-353		13
34	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	16.4	31
33	Systematic design of chemical oscillators. 64. Design of pH-regulated oscillators. *Accounts of Chemical Research*, **1990**, 23, 258-263	24.3	108
32	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		77
31	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	16.4	14
30	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	16.4	61
29	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	16.4	19
28	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	16.4	26
27	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		8
26	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	16.4	60
25	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	16.4	74
24	A new iodate oscillator: the Landolt reaction with ferrocyanide in a CSTR. *Journal of the American Chemical Society*, **1986**, 108, 2826-2830	16.4	85
23	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	16.4	56
22	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	16.4	26
21	Systematic design of chemical oscillators. Part 14. Inorganic bromate oscillators. Bromate-chlorite-reductant. *The Journal of Physical Chemistry*, **1983**, 87, 3212-3219		13
20	Systematic design of chemical oscillators. Part 16. Inorganic bromate oscillators. Bromate-manganous-reductant. *The Journal of Physical Chemistry*, **1983**, 87, 3725-3728		23

19	Oscillating Chemical Reactions. *Scientific American*, **1983**, 248, 112-123	0.5	108
18	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		98
17	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		136
16	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		51
15	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	16.4	72
14	Systematic design of chemical oscillators. Part 9. Kinetics and mechanism of the oxidation of iodine by chlorite ion. *Inorganic Chemistry*, **1982**, 21, 2192-2196	5.1	17
13	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	16.4	45
12	Systematic design of chemical oscillators. 10. Minimal bromate oscillator: bromate-bromide-catalyst. *Journal of the American Chemical Society*, **1982**, 104, 2657-2658	16.4	63
11	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	16.4	33
10	Oscillations and bistability in hydrogen-platinum-oxyhalogen systems. *Journal of the American Chemical Society*, **1981**, 103, 3723-3727	16.4	17
9	New family of homogeneous chemical oscillators: chlorite–iodate–substrate. *Nature*, **1981**, 292, 816-818	50.4	25
8	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	0.4	1
7	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		25
6	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	16.4	77
5	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		68
4	Novel type of oscillatory chemical reactions. *Reaction Kinetics and Catalysis Letters*, **1978**, 8, 273-276		15
3	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		106
2	Hydrogen-bonded complexes between pyridine and phenol in carbon tetrachloride solutions. *Journal of the Chemical Society Faraday Transactions I*, **1977**, 73, 1326		11

1 Recent advances in the temporal and spatiotemporal dynamics induced by bromate□ulfite-based pH-oscillators. *Reaction Kinetics, Mechanisms and Catalysis*,1 1.6