Marcus J B Hauser

List of Publications by Year
in descending order

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77 papers	1,353 citations	331642 21 h-index	454934 30 g-index
79 all docs	79 docs citations	79 times ranked	820 citing authors

#	Article	IF	Citations
1	Mixed-mode oscillations and homoclinic chaos in an enzyme reaction. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 2857.	1.7	63
2	Routes to Chaos in the Peroxidaseâ"Oxidase Reaction:Â Period-Doubling and Period-Adding. Journal of Physical Chemistry B, 1997, 101, 5075-5083.	2.6	52
3	Plasmodial vein networks of the slime moldPhysarum polycephalumform regular graphs. Physical Review E, 2010, 82, 046113.	2.1	51
4	Desynchronisation of Glycolytic Oscillations in Yeast Cell Populations. PLoS ONE, 2012, 7, e43276.	2.5	47
5	The Role of Naturally Occurring Phenols in Inducing Oscillations in the Peroxidaseâ"Oxidase Reaction. Biochemistry, 1998, 37, 2458-2469.	2.5	45
6	Scroll Wave Instabilities in an Excitable Chemical Medium. Physical Review Letters, 2008, 100, 148302.	7.8	45
7	An elegant method to study an isolated spiral wave in a thin layer of a batch Belousovâ€"Zhabotinsky reaction under oxygen-free conditions. Physical Chemistry Chemical Physics, 2006, 8, 1425.	2.8	39
8	Functional organization of the vascular network ofPhysarum polycephalum. Physical Biology, 2013, 10, 026003.	1.8	36
9	Flow-field development during finger splitting at an exothermic chemical reaction front. Physical Review E, 2007, 75, 026309.	2.1	32
10	Coupled chaotic states and apparent noise in experiment and model. Journal of Chemical Physics, 1994, 100, 1058-1065.	3.0	31
11	Mechanism of protection of peroxidase activity by oscillatory dynamics. FEBS Journal, 2003, 270, 2796-2804.	0.2	31
12	Oscillatory dynamics protect enzymes and possibly cells against toxic substances. Faraday Discussions, 2002, 120, 215-227.	3.2	29
13	Mixed-mode oscillations in a homogeneous p H-oscillatory chemical reaction system. Chaos, 2008, 18, 015102.	2.5	28
14	Turing space in reaction-diffusion systems with density-dependent cross diffusion. Physical Review E, 2013, 87, .	2.1	28
15	Reorientation of scroll rings in an advective field. Physical Review E, 2008, 77, 015201.	2.1	26
16	Buoyancy-driven convection may switch between reactive states in three-dimensional chemical waves. Physical Review E, 2012, 85, 036303.	2.1	26
17	Nonchaos-Mediated Mixed-Mode Oscillations in an Enzyme Reaction System. Journal of Physical Chemistry Letters, 2014, 5, 4187-4193.	4.6	26
18	Migratory behaviour of Physarum polycephalum microplasmodia. European Physical Journal: Special Topics, 2015, 224, 1199-1214.	2.6	25

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19	Oscillations and Complex Dynamics in the Peroxidaseâ^'Oxidase Reaction Induced by Naturally Occurring Aromatic Substrates. Journal of the American Chemical Society, 1997, 119, 2084-2087.	13.7	24
20	Patterns of cell thickness oscillations during directional migration of Physarum polycephalum. European Biophysics Journal, 2015, 44, 349-358.	2.2	24
21	Reduction of Chemical Reaction Networks Using Quasi-Integrals. Journal of Physical Chemistry A, 2005, 109, 441-450.	2.5	22
22	Metabolic Synchronization by Traveling Waves in Yeast Cell Layers. Biophysical Journal, 2011, 100, 809-813.	0.5	22
23	Convective dynamics of traveling autocatalytic fronts in a modulated gravity field. Physical Chemistry Chemical Physics, 2014, 16, 26279-26287.	2.8	22
24	Routes to Chaos in the Peroxidaseâ^'Oxidase Reaction. 2. The Fat Torus Scenario. Journal of Physical Chemistry B, 1998, 102, 632-640.	2.6	21
25	Oscillations and uniaxial mechanochemical waves in a model of an active poroelastic medium: Application to deformation patterns in protoplasmic droplets of Physarum polycephalum. Physica D: Nonlinear Phenomena, 2016, 318-319, 58-69.	2.8	21
26	pH oscillations in the heminâ€“hydrogen peroxideâ€“sulfite reaction. Faraday Discussions, 2002, 120, 229-236.	3.2	20
27	Feedback loops for Shilâ€™nikov chaos: The peroxidase-oxidase reaction. Journal of Chemical Physics, 2006, 125, 014901.	3.0	20
28	Wavy fronts and speed bifurcation in excitable systems with cross diffusion. Physical Review E, 2008, 77, 036219.	2.1	20
29	On the role of methylene blue in the oscillating peroxidaseâ€“oxidase reaction. Physical Chemistry Chemical Physics, 2000, 2, 1685-1692.	2.8	18
30	Stability of scroll ring orientation in an advective field. Physical Review E, 2008, 77, 056214.	2.1	18
31	Cyclosis-mediated transfer of H2O2 elicited by localized illumination of Chara cells and its relevance to the formation of pH bands. Protoplasma, 2013, 250, 1339-1349.	2.1	18
32	Spatial Desynchronization of Glycolytic Waves as Revealed by Karhunenâ^'LoÃ¨ve Analysis. Journal of Physical Chemistry B, 2008, 112, 14334-14341.	2.6	17
33	Chemo-Mechanical Coupling in Reactive Droplets. Journal of Physical Chemistry C, 2013, 117, 13080-13086.	3.1	17
34	Stirring sense in a chemical reactor. The Journal of Physical Chemistry, 1992, 96, 9332-9338.	2.9	16
35	Principal Component Analysis of Dynamical Features in the Peroxidaseâ^'Oxidase Reaction. Analytical Chemistry, 2000, 72, 1381-1388.	6.5	16
36	Origin of burstingpHoscillations in an enzyme model reaction system. Physical Review E, 2005, 72, 066205.	2.1	15

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37	Surfactant-induced gradients in the three-dimensional Belousov-Zhabotinsky reaction. Physical Review E, 2011, 84, 056210.	2.1	15
38	Partial synchronisation of glycolytic oscillations in yeast cell populations. Scientific Reports, 2020, 10, 19714.	3.3	15
39	An Alternating Current Battery. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1993, 97, 55-58.	0.9	14
40	Formation of thermal plumes in an autocatalytic exothermic chemical reaction. Physical Review E, 1995, 52, 6146-6153.	2.1	14
41	Sub-Hopf/fold-cycle bursting and its relation to (quasi-)periodic oscillations. Journal of Physics: Conference Series, 2006, 55, 214-231.	0.4	14
42	Excitation-induced dynamics of external pH pattern in Chara corallina cells and its dependence on external calcium concentration. Photochemical and Photobiological Sciences, 2007, 6, 103-109.	2.9	14
43	Statistical physics of self-propelled particles. European Physical Journal: Special Topics, 2015, 224, 1147-1150.	2.6	14
44	Interaction of Pure Marangoni Convection with a Propagating Reactive Interface under Microgravity. Physical Review Letters, 2018, 121, 024501.	7.8	14
45	Modeling the Light- and Redox-Dependent Interaction of PpsR/AppA inÂRhodobacter sphaeroides. Biophysical Journal, 2011, 100, 2347-2355.	0.5	13
46	Twists of Opposite Handedness on a Scroll Wave. Physical Review Letters, 2013, 110, 234102.	7.8	12
47	Dynamics of frontal extension of an amoeboid cell. Europhysics Letters, 2014, 108, 50010.	2.0	12
48	Complexity of a peroxidaseâ€“oxidase reaction model. Physical Chemistry Chemical Physics, 2021, 23, 1943-1955.	2.8	12
49	Metamaterial-based transmit and receive system for whole-body magnetic resonance imaging at ultra-high magnetic fields. PLoS ONE, 2018, 13, e0191719.	2.5	11
50	Spatiotemporal dynamics of glycolytic waves provides new insights into the interactions between immobilized yeast cells and gels. Biophysical Chemistry, 2010, 153, 54-60.	2.8	10
51	A wavelet and Zernike-polynomial-based shearing interferometry approach to analyse hydrodynamic instabilities at interfaces. Acta Astronautica, 2011, 68, 707-716.	3.2	10
52	Chemotaxis with directional sensing during Dictyostelium aggregation. Comptes Rendus - Biologies, 2013, 336, 565-571.	0.2	10
53	Interaction of a Pair of Parallel Scroll Waves. Journal of Physical Chemistry A, 2013, 117, 12711-12718.	2.5	10
54	Diatom-inspired Plastic Deformation Elements for Energy Absorption in Automobiles. Journal of Bionic Engineering, 2015, 12, 613-623.	5.0	10

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55	Synchronisation of glycolytic activity in yeast cells. Current Genetics, 2022, 68, 69-81.	1.7	10
56	Oscillations in the Belousovâ€“Zhabotinsky reaction with sorbitol in the presence of bromine. Physical Chemistry Chemical Physics, 2003, 5, 5454-5458.	2.8	9
57	Bursting Oscillations in the Revised Mechanism of the Hemin â€“ Hydrogen Peroxide â€“ Sulfite Oscillator. Zeitschrift Fur Physikalische Chemie, 2003, 217, 1427-1442.	2.8	9
58	An extended model for the repression of photosynthesis genes by the AppA/PpsR system in Rhodobacterâ€ƒsphaeroides. FEBS Journal, 2012, 279, 3449-3461.	4.7	9
59	Periodic and Bursting pH Oscillations in an Enzyme Model Reaction. Zeitschrift Fur Physikalische Chemie, 2002, 216, .	2.8	8
60	Helical deformation of the filament of a scroll wave. Physical Review E, 2012, 86, 066208.	2.1	8
61	Streamless aggregation of Dictyostelium in the presence of isopropylidenadenosin. Biophysical Chemistry, 2008, 132, 9-17.	2.8	7
62	Wavy fronts in reaction-diffusion systems with cross advection. European Physical Journal B, 2009, 72, 457-465.	1.5	6
63	Monitoring glycolytic oscillations using AlGaN/GaN high electron mobility transistors (HEMTs). Sensors and Actuators B: Chemical, 2010, 149, 310-313.	7.8	6
64	Acceleration of chemical reaction fronts. European Physical Journal: Special Topics, 2018, 227, 493-507.	2.6	6
65	Stirring sense discriminates between stationary and oscillatory states. Journal of Chemical Physics, 1992, 97, 2163-2165.	3.0	5
66	Macroscopic Dynamics as Reporter of Mesoscopic Organization: The Belousovâ˜Zhabotinsky Reaction in Aqueous Layers of DPPC Lamellar Phases. Journal of Physical Chemistry A, 2011, 115, 3227-3232.	2.5	5
67	Analysis of complex oscillatory dynamics of a pH oscillator. Russian Journal of Physical Chemistry A, 2007, 81, 1407-1412.	0.6	4
68	High-frequency detection of cell activity ofPhysarum polycephalumby a planar open gate AlGaN/GaN HEMT. Journal Physics D: Applied Physics, 2014, 47, 425401.	2.8	4
69	Routes to chaos in the peroxidase-oxidase reaction. , 1999, , 252-272.		3
70	Spatial control of the energy metabolism of yeast cells through electrolytic generation of oxygen. Physical Biology, 2009, 6, 046011.	1.8	3
71	Dependence of scroll-wave dynamics on the orientation of a gradient of excitability. Physical Review E, 2013, 88, 062923.	2.1	3
72	The solubilization site of 5,10,15,20-tetrakis-(2,6-dichlorophenyl)-porphyrin-Mn(III) in DPPC vesicles: A spectrophotometric and tensiometric study. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2006, 278, 212-217.	4.7	2

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73	Dynamics of scroll waves in a cylinder jacket geometry. Physical Review E, 2017, 96, 012203.	2.1	2
74	Acceleration of chemical reaction fronts. European Physical Journal: Special Topics, 2018, 227, 509-520.	2.6	2
75	Effective mixing due to oscillatory laminar flow in tubular networks of plasmodial slime moulds. New Journal of Physics, 2020, 22, 053007.	2.9	2
76	Kinetic evidence for the incorporation of the [(pentamethylcyclopentadienyl)(2,2â€²-bipyridyl)(aquo)rhodium(III)] complex into DPPC vesicles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 322, 243-247.	4.7	1
77	NMDA-induced stimulation of glycolysis in developing hippocampal cell cultures. Open Life Sciences, 2009, 4, 50-57.	1.4	0