Marko Marhl

List of Publications by Year
in descending order

78 papers	2,812 citations	201674 27 h-index	182427 51 g-index
79 all docs	79 docs citations	79 times ranked	2244 citing authors

#	Article	IF	Citations
1	Age-Related Changes in Lipid and Glucose Levels Associated with Drug Use and Mortality: An Observational Study. Journal of Personalized Medicine, 2022, 12, 280.	2.5	4
2	Modeling the Amino Acid Effect on Glucagon Secretion from Pancreatic Alpha Cells. Metabolites, 2022, 12, 348.	2.9	3
3	Lipotoxicity in a Vicious Cycle of Pancreatic Beta Cell Exhaustion. Biomedicines, 2022, 10, 1627.	3.2	1
4	Editorial: Multilevel Organization and Functional Integration in Organisms. Frontiers in Physiology, 2021, 12, 626977.	2.8	0
5	Assessing Different Temporal Scales of Calcium Dynamics in Networks of Beta Cell Populations. Frontiers in Physiology, 2021, 12, 612233.	2.8	22
6	Role of cAMP in Double Switch of Glucagon Secretion. Cells, 2021, 10, 896.	4.1	4
7	Flexibility of enzymatic transitions as a hallmark of optimized enzyme steady-state kinetics and thermodynamics. Computational Biology and Chemistry, 2021, 91, 107449.	2.3	4
8	NMDA receptor inhibition increases, synchronizes, and stabilizes the collective pancreatic beta cell activity: Insights through multilayer network analysis. PLoS Computational Biology, 2021, 17, e1009002.	3.2	17
9	Socio-demographic and health factors drive the epidemic progression and should guide vaccination strategies for best COVID-19 containment. Results in Physics, 2021, 26, 104433.	4.1	61
10	Response to â€œComments on the paper â€˜Flexibility of enzymatic transitions as a hallmark of optimized enzyme steady-state kinetics and thermodynamicsâ€™â€• Computational Biology and Chemistry, 2021, 95, 107572.	2.3	0
11	Mitochondrial Dysfunction in Pancreatic Alpha and Beta Cells Associated with Type 2 Diabetes Mellitus. Life, 2020, 10, 348.	2.4	14
12	Diabetes and metabolic syndrome as risk factors for COVID-19. Diabetes and Metabolic Syndrome: Clinical Research and Reviews, 2020, 14, 671-677.	3.6	59
13	Modelling of energy-driven switch for glucagon and insulin secretion. Journal of Theoretical Biology, 2020, 493, 110213.	1.7	10
14	Modelling of dysregulated glucagon secretion in type 2 diabetes by considering mitochondrial alterations in pancreatic Î±-cells. Royal Society Open Science, 2020, 7, 191171.	2.4	21
15	Applying network theory to fables: complexity in Slovene belles-lettres for different age groups. Journal of Complex Networks, 2019, 7, 114-127.	1.8	12
16	Heterogeneity and Delayed Activation as Hallmarks of Self-Organization and Criticality in Excitable Tissue. Frontiers in Physiology, 2019, 10, 869.	2.8	33
17	Data-driven classification of residential energy consumption patterns by means of functional connectivity networks. Applied Energy, 2019, 242, 506-515.	10.1	16
18	Loosening the shackles of scientific disciplines with network science. Physics of Life Reviews, 2018, 24, 162-167.	2.8	8

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19	Network science of biological systems at different scales: A review. Physics of Life Reviews, 2018, 24, 118-135.	2.8	305
20	Critical and Supercritical Spatiotemporal Calcium Dynamics in Beta Cells. Frontiers in Physiology, 2017, 8, 1106.	2.8	41
21	Planar cell polarity genes frizzled4 and frizzled6 exert patterning influence on arterial vessel morphogenesis. PLoS ONE, 2017, 12, e0171033.	2.5	7
22	Fizikalni sistemi â€" Â»peskovnikÂ« razvoja funkcionalne pismenosti pri otrocih. , 2017, , .		0
23	Primerjava statistiÄnih lastnosti leposlovnih besedil, namenjenih razliÄnim starostnim skupinam. , 2017, , .		0
24	The relationship between node degree and dissipation rate in networks of diffusively coupled oscillators and its significance for pancreatic beta cells. Chaos, 2015, 25, 073115.	2.5	29
25	Progressive glucose stimulation of islet beta cells reveals a transition from segregated to integrated modular functional connectivity patterns. Scientific Reports, 2015, 5, 7845.	3.3	73
26	Multilayer network representation of membrane potential and cytosolic calcium concentration dynamics in beta cells. Chaos, Solitons and Fractals, 2015, 80, 76-82.	5.1	26
27	The Analysis of Intracellular and Intercellular Calcium Signaling in Human Anterior Lens Capsule Epithelial Cells with Regard to Different Types and Stages of the Cataract. PLoS ONE, 2015, 10, e0143781.	2.5	16
28	Defects in Planar Cell Polarity of Epithelium. Behavior Research Methods, 2014, 20, 197-217.	4.0	2
29	The influence of gap junction network complexity on pulmonary artery smooth muscle reactivity in normoxic and chronically hypoxic conditions. Experimental Physiology, 2014, 99, 272-285.	2.0	7
30	Broad-scale small-world network topology induces optimal synchronization of flexible oscillators. Chaos, Solitons and Fractals, 2014, 69, 14-21.	5.1	7
31	Functional Connectivity in Islets of Langerhans from Mouse Pancreas Tissue Slices. PLoS Computational Biology, 2013, 9, e1002923.	3.2	152
32	The role of neural architecture and the speed of signal propagation in the process of synchronization of bursting neurons. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 2764-2770.	2.6	19
33	Jensenâ€™s inequality as a tool for explaining the effect of oscillations on the average cytosolic calcium concentration. Theory in Biosciences, 2010, 129, 25-38.	1.4	6
34	Importance of cell variability for calcium signaling in rat airway myocytes. Biophysical Chemistry, 2010, 148, 42-50.	2.8	12
35	Pacemaker-guided noise-induced spatial periodicity in excitable media. Physica D: Nonlinear Phenomena, 2009, 238, 506-515.	2.8	56
36	Signal amplification in biological and electrical engineering systems. Biophysical Chemistry, 2009, 143, 132-138.	2.8	19

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37	Establishing the stochastic nature of intracellular calcium oscillations from experimental data. Biophysical Chemistry, 2008, 132, 33-38.	2.8	86
38	Equality of average and steady-state levels in some nonlinear models of biological oscillations. Theory in Biosciences, 2008, 127, 1-14.	1.4	18
39	Spatio-temporal modelling explains the effect of reduced plasma membrane Ca2+ efflux on intracellular Ca2+ oscillations in hepatocytes. Journal of Theoretical Biology, 2008, 252, 419-426.	1.7	16
40	CHAOS BETWEEN STOCHASTICITY AND PERIODICITY IN THE PRISONER'S DILEMMA GAME. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 869-875.	1.7	11
41	Sand as a medium for transmission of vibratory signals of prey in antlions Euroleon nostras (Neuroptera: Myrmeleontidae). Physiological Entomology, 2007, 32, 268-274.	1.5	43
42	Periodic calcium waves in coupled cells induced by internal noise. Chemical Physics Letters, 2007, 437, 143-147.	2.6	84
43	Role of cascades in converting oscillatory signals into stationary step-like responses. BioSystems, 2007, 87, 58-67.	2.0	12
44	Spatial coherence resonance in excitable biochemical media induced by internal noise. Biophysical Chemistry, 2007, 128, 210-214.	2.8	47
45	Noise-induced spatial dynamics in the presence of memory loss. Physica A: Statistical Mechanics and Its Applications, 2007, 375, 72-80.	2.6	15
46	A minimal model for decoding of time-limited Ca2+ oscillations. Biophysical Chemistry, 2006, 120, 161-167.	2.8	34
47	From stochasticity to determinism in the collective dynamics of diffusively coupled cells. Chemical Physics Letters, 2006, 421, 106-110.	2.6	34
48	Pacemaker enhanced noise-induced synchrony in cellular arrays. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 353, 372-377.	2.1	19
49	Modeling of Molecular and Cellular Mechanisms Involved in Ca²⁺ Signal Encoding in Airway Myocytes. Cell Biochemistry and Biophysics, 2006, 46, 285-302.	1.8	11
50	Chaos in temporarily destabilized regular systems with the slow passage effect. Chaos, Solitons and Fractals, 2006, 27, 395-403.	5.1	28
51	Determining the flexibility of regular and chaotic attractors. Chaos, Solitons and Fractals, 2006, 28, 822-833.	5.1	23
52	Modelling of calcium handling in airway myocytes. Progress in Biophysics and Molecular Biology, 2006, 90, 64-87.	2.9	18
53	Evolutionary and dynamical coherence resonances in the pair approximated prisoner's dilemma game. New Journal of Physics, 2006, 8, 142-142.	2.9	115
54	Differential regulation of proteins by bursting calcium oscillationsâ€"a theoretical study. BioSystems, 2005, 81, 49-63.	2.0	22

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55	Drop formation in a falling stream of liquid. American Journal of Physics, 2005, 73, 415-419.	0.7	13
56	Selective regulation of cellular processes via protein cascades acting as band-pass filters for time-limited oscillations. FEBS Letters, 2005, 579, 5461-5465.	2.8	28
57	Transition from Stochastic to Deterministic Behavior in Calcium Oscillations. Biophysical Journal, 2005, 89, 1603-1611.	0.5	80
58	SYNCHRONIZATION OF REGULAR AND CHAOTIC OSCILLATIONS: THE ROLE OF LOCAL DIVERGENCE AND THE SLOW PASSAGE EFFECT â€" A Case Study on Calcium Oscillations. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2004, 14, 2735-2751.	1.7	39
59	Frequency dependent stochastic resonance in a model for intracellular Ca2+ oscillations can be explained by local divergence. Physica A: Statistical Mechanics and Its Applications, 2004, 332, 123-140.	2.6	25
60	Role of Sarcoplasmic Reticulum and Mitochondria in Ca2+ Removal in Airway Myocytes. Biophysical Journal, 2004, 86, 2583-2595.	0.5	27
61	Noise enhances robustness of intracellular Ca2+ oscillations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 316, 304-310.	2.1	34
62	Resonance effects determine the frequency of bursting Ca2+ oscillations. Chemical Physics Letters, 2003, 376, 432-437.	2.6	19
63	Sensitivity and flexibility of regular and chaotic calcium oscillations. Biophysical Chemistry, 2003, 104, 509-522.	2.8	41
64	Different types of bursting calcium oscillations in non-excitable cells. Chaos, Solitons and Fractals, 2003, 18, 759-773.	5.1	94
65	Under what conditions signal transduction pathways are highly flexible in response to external forcing? A case study on calcium oscillations. Journal of Theoretical Biology, 2003, 224, 491-500.	1.7	19
66	The Kelvin water-drop generator. Physics Education, 2002, 37, 155-156.	0.5	1
67	Modelling of simple and complex calcium oscillations. FEBS Journal, 2002, 269, 1333-1355.	0.2	354
68	The small world in biophysical systems structural properties of glycolysis and the TCA cycle in Escherichia coli. Cellular and Molecular Biology Letters, 2002, 7, 129-31.	7.0	1
69	Birhythmicity, trirhythmicity and chaos in bursting calcium oscillations. Biophysical Chemistry, 2001, 90, 17-30.	2.8	64
70	Mitochondria regulate the amplitude of simple and complex calcium oscillations. Biophysical Chemistry, 2001, 94, 59-74.	2.8	47
71	Complex calcium oscillations and the role of mitochondria and cytosolic proteins. BioSystems, 2000, 57, 75-86.	2.0	137
72	Contributory presentations/posters. Journal of Biosciences, 1999, 24, 33-198.	1.1	0

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73	Modelling oscillations of calcium and endoplasmic reticulum transmembrane potential. Bioelectrochemistry, 1998, 46, 79-90.	1.0	22
74	A simple mathematical model of a dripping tap. European Journal of Physics, 1997, 18, 377-383.	0.6	10
75	Modelling the interrelations between calcium oscillations and ER membrane potential oscillations. Biophysical Chemistry, 1997, 63, 221-239.	2.8	42
76	Diffusion layer caused by local ionic transmembrane fluxes. Pflugers Archiv European Journal of Physiology, 1996, 431, R259-R260.	2.8	2
77	Extensions of sweep surface constructions. Computers and Graphics, 1996, 20, 893-903.	2.5	9
78	On the correct determination of rotational angles for twisted-profiled sweep objects. Computers and Graphics, 1994, 18, 691-694.	2.5	2