Michal Cifra

List of Publications by Year
in descending order

91 papers	1,615 citations	361045 20 h-index	329751 37 g-index
97 all docs	97 docs citations	97 times ranked	1285 citing authors

#	Article	IF	Citations
1	Electromagnetic cellular interactions. Progress in Biophysics and Molecular Biology, 2011, 105, 223-246.	1.4	232
2	Ultra-weak photon emission from biological samples: Definition, mechanisms, properties, detection and applications. Journal of Photochemistry and Photobiology B: Biology, 2014, 139, 2-10.	1.7	163
3	Electric field generated by axial longitudinal vibration modes of microtubule. BioSystems, 2010, 100, 122-131.	0.9	114
4	EMISSION OF MITOCHONDRIAL BIOPHOTONS AND THEIR EFFECT ON ELECTRICAL ACTIVITY OF MEMBRANE VIA MICROTUBULES. Journal of Integrative Neuroscience, 2011, 10, 65-88.	0.8	81
5	High-frequency electric field and radiation characteristics of cellular microtubule network. Journal of Theoretical Biology, 2011, 286, 31-40.	0.8	77
6	Cancer physics: diagnostics based on damped cellular elastoelectrical vibrations in microtubules. European Biophysics Journal, 2011, 40, 747-759.	1.2	63
7	Cell-to-cell signaling through light: just a ghost of chance?. Cell Communication and Signaling, 2013, 11, 87.	2.7	46
8	Roadmap on semiconductorâ€“cell biointerfaces. Physical Biology, 2018, 15, 031002.	0.8	45
9	Broadband Wireless Sensing System for Non-Invasive Testing of Biological Samples. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 251-259.	2.7	45
10	Tubulin response to intense nanosecond-scale electric field in molecular dynamics simulation. Scientific Reports, 2019, 9, 10477.	1.6	45
11	Measurement of Electrical Oscillations and Mechanical Vibrations of Yeast Cells Membrane Around 1â€‰kHz. Electromagnetic Biology and Medicine, 2009, 28, 223-232.	0.7	35
12	Ultra-weak photon emission as a dynamic tool for monitoring oxidative stress metabolism. Scientific Reports, 2017, 7, 1229.	1.6	30
13	Biophotons, coherence and photocount statistics: A critical review. Journal of Luminescence, 2015, 164, 38-51.	1.5	29
14	Reversible and Irreversible Modulation of Tubulin Selfâ€Assembly by Intense Nanosecond Pulsed Electric Fields. Advanced Materials, 2019, 31, 1903636.	11.1	29
15	Non-chemical and non-contact cell-to-cell communication: a short review. American Journal of Translational Research (discontinued), 2013, 5, 586-93.	0.0	29
16	Electro-Acoustic Behavior of the Mitotic Spindle: A Semi-Classical Coarse-Grained Model. PLoS ONE, 2014, 9, e86501.	1.1	28
17	Multi-mode electro-mechanical vibrations of a microtubule:In silicodemonstration of electric pulse moving along a microtubule. Applied Physics Letters, 2014, 104, 243702.	1.5	27
18	Challenges in coupling atmospheric electricity with biological systems. International Journal of Biometeorology, 2021, 65, 45-58.	1.3	23

#	Article	IF	Citations
19	Lunisolar tidal synchronism with biophoton emission during intercontinental wheat-seedling germination tests. Plant Signaling and Behavior, 2014, 9, e28671.	1.2	22
20	Vibrations of microtubules: Physics that has not met biology yet. Wave Motion, 2017, 72, 13-22.	1.0	22
21	Deformation pattern in vibrating microtubule: Structural mechanics study based on an atomistic approach. Scientific Reports, 2017, 7, 4227.	1.6	22
22	The role of magnetic fields in neurodegenerative diseases. International Journal of Biometeorology, 2021, 65, 107-117.	1.3	20
23	Endogenous Chemiluminescence from Germinating Arabidopsis Thaliana Seeds. Scientific Reports, 2018, 8, 16231.	1.6	19
24	Radiofrequency and microwave interactions between biomolecular systems. Journal of Biological Physics, 2016, 42, 1-8.	0.7	18
25	Possible molecular and cellular mechanisms at the basis of atmospheric electromagnetic field bioeffects. International Journal of Biometeorology, 2021, 65, 59-67.	1.3	18
26	Technical aspects of measurement of cellular electromagnetic activity. European Biophysics Journal, 2010, 39, 1465-1470.	1.2	17
27	Electrodynamic eigenmodes in cellular morphology. BioSystems, 2012, 109, 356-366.	0.9	17
28	Molecular dynamics simulation of the nanosecond pulsed electric field effect on kinesin nanomotor. Scientific Reports, 2019, 9, 19721.	1.6	17
29	Tracking biochemical changes correlated with ultra-weak photon emission using metabolomics. Journal of Photochemistry and Photobiology B: Biology, 2016, 163, 237-245.	1.7	16
30	Rational design of sensor for broadband dielectric spectroscopy of biomolecules. Sensors and Actuators B: Chemical, 2018, 273, 62-69.	4.0	14
31	Photocount statistics of ultra-weak photon emission from germinating mung bean. Journal of Photochemistry and Photobiology B: Biology, 2016, 162, 50-55.	1.7	13
32	Microtubule Cytoskeleton Remodeling by Nanosecond Pulsed Electric Fields. Advanced Biology, 2020, 4, e2000070.	3.0	13
33	Resolving controversy of unusually high refractive index of a tubulin. Europhysics Letters, 2017, 117, 38003.	0.7	12
34	On the Photonic Cellular Interaction and the Electric Activity of Neurons in the Human Brain. Journal of Physics: Conference Series, 2011, 329, 012006.	0.3	11
35	Nanosecond Pulsed Electric Field Labâ€onâ€Chip Integrated in Superâ€Resolution Microscope for Cytoskeleton Imaging. Advanced Materials Technologies, 2020, 5, 1900669.	3.0	11
36	Short-time fractal analysis of biological autoluminescence. PLoS ONE, 2019, 14, e0214427.	1.1	10

#	Article	IF	Citations
37	Spontaneous ultra-weak photon emission from human hands varies diurnally. Proceedings of SPIE, 2007, , .	0.8	9
38	Water Models in Molecular Dynamics Simulation Prediction of Dielectric Properties of Biomaterials. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 97-104.	2.3	9
39	Glossary on atmospheric electricity and its effects on biology. International Journal of Biometeorology, 2021, 65, 5-29.	1.3	9
40	Microfluidic on-chip microwave sensing of the self-assembly state of tubulin. Sensors and Actuators B: Chemical, 2021, 328, 129068.	4.0	9
41	Spectral Perspective on the Electromagnetic Activity of Cells. Current Topics in Medicinal Chemistry, 2015, 15, 513-522.	1.0	9
42	Using multifractal analysis of ultra-weak photon emission from germinating wheat seedlings to differentiate between two grades of intoxication with potassium dichromate. Journal of Physics: Conference Series, 2011, 329, 012020.	0.3	8
43	Optical spectral analysis of ultra-weak photon emission from tissue culture and yeast cells. , 2015, , .		8
44	Low frequency electromagnetic field effects on ultra-weak photon emission from yeast cells. , 2016, , .		8
45	Optomechanical proposal for monitoring microtubule mechanical vibrations. Physical Review E, 2017, 96, 012404.	0.8	8
46	Electric field generated by longitudinal axial microtubule vibration modes with high spatial resolution microtubule model. Journal of Physics: Conference Series, 2011, 329, 012013.	0.3	7
47	Influence of non-adherent yeast cells on electrical characteristics of diamond-based field-effect transistors. Applied Surface Science, 2017, 395, 214-219.	3.1	7
48	Electromagnetic elds and optomechanics in cancer diagnostics and treatment. Frontiers in Bioscience - Landmark, 2018, 23, 1391-1406.	3.0	7
49	Enhancement of the biological autoluminescence by mito-liposomal gold nanoparticle nanocarriers. Journal of Photochemistry and Photobiology B: Biology, 2020, 204, 111812.	1.7	7
50	What is more important for radiated power from cells - size or geometry?. Journal of Physics: Conference Series, 2011, 329, 012014.	0.3	6
51	Electro-opening of a microtubule lattice in silico. Computational and Structural Biotechnology Journal, 2021, 19, 1488-1496.	1.9	6
52	Biological autoluminescence as a noninvasive monitoring tool for chemical and physical modulation of oxidation in yeast cell culture. Scientific Reports, 2021, 11, 328.	1.6	6
53	Poisson pre-processing of nonstationary photonic signals: Signals with equality between mean and variance. PLoS ONE, 2017, 12, e0188622.	1.1	6
54	Lab-on-chip microscope platform for electro-manipulation of a dense microtubules network. Scientific Reports, 2022, 12, 2462.	1.6	6

#	Article	IF	Citations
55	Microwave absorption by nanoresonator vibrations tuned with surface modification. Europhysics Letters, 2016, 115, 44003.	0.7	4
56	Feasibility Study of Superficial Hyperthermia Treatment Planning Using COMSOL Multiphysics. , 2008, , .		3
57	Grounded coplanar waveguide-based 0.5â€“50 GHz sensor for dielectric spectroscopy. , 2017, , .		3
58	Dataset of molecular dynamics simulation trajectories of amino-acid solutions with various force fields, water models and modified force field parameters. Data in Brief, 2020, 30, 105483.	0.5	3
59	Dependence of amino-acid dielectric relaxation on solute-water interaction: Molecular dynamics study. Journal of Molecular Liquids, 2020, 303, 112613.	2.3	3
60	Toward the creation of an ontology for the coupling of atmospheric electricity with biological systems. International Journal of Biometeorology, 2021, 65, 31-44.	1.3	3
61	Biological autoluminescence for assessing oxidative processes in yeast cell cultures. Scientific Reports, 2021, 11, 10852.	1.6	3
62	Ultra Low Frequency Yeast Cells Electric Activity. , 2008, , .		2
63	Electric oscillations generated by collective vibration modes of microtubule. Proceedings of SPIE, 2010, , .	0.8	2
64	Electric field generated by higher vibration modes of microtubule. , 2010, , .		2
65	Microtubule Electrodynamics Associated with Vibrational Normal Modes. Biophysical Journal, 2015, 108, 449a.	0.2	2
66	Chemical modulation of the ultra-weak photon emission fromSaccharomyces cerevisiaeand differentiated HL-60 cells. , 2015, , .		2
67	TRL Calibrated Coplanar Microwave Sensor for Characterization of Biomolecules. , 2017, , .		2
68	Peter Barlowâ€™s insights and contributions to the study of tidal gravity variations and ultra-weak light emissions in plants. Annals of Botany, 2018, 122, 757-766.	1.4	2
69	Biological autoluminescence as a non-invasive monitoring tool for pulsed electric field effects on yeast cells. , 2020, , .		2
70	Modulation of micro/nanobiostructureâ€™s functions by intense nanosecond pulsed electric fields. , 2019, , .		1
71	Electrical Vibrations of Yeast Cell Membrane. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2007, 3, 1190-1194.	0.4	1
72	Hydroxyl Radical Induced Ultra-Weak Photon Emission from Tyrosine Solutions. Communications - Scientific Letters of the University of Zilina, 2015, 17, 3-7.	0.3	1

#	Article	IF	Citations
73	Daily Variation of Photon Emission Intensity from the Human Hands. , 2007, , .		0
74	Biological Cell as IR-optical Resonator. , 2010, , .		0
75	Electromagnetic-based nano-resolution microscopies for biological research. , 2010, , .		0
76	Disturbances of electrodynamic activity affect abortion in human. Journal of Physics: Conference Series, 2011, 329, 012030.	0.3	0
77	Two-channel measurement of the ultra-weak photon emission from a yeast culture during its growth. , 2014, , .		0
78	Cellular electrodynamic activity. BIO Web of Conferences, 2016, 6, 01005.	0.1	0
79	Deformability of Microtubules: An Atomistic Computational Study. Biophysical Journal, 2016, 110, 131a.	0.2	0
80	Non-Invasive Label-Free Imaging of Oxidative Processes in Human Skin. Biophysical Journal, 2017, 112, 581a.	0.2	0
81	Microvolume Dielectric Spectroscopy and Molecular Dynamics of Amino Acids. Biophysical Journal, 2017, 112, 457a.	0.2	0
82	Development of experimental platform for investigation of biological response of cells to weak low frequency electromagnetic fields. , 2017, , .		0
83	Measurement of Weak Low Frequency Electromagnetic Field Effects on Cells. , 2018, , .		0
84	Molecular Dynamics Simulation Study of Intense Electric Field Effect on Tubulin. , 2018, , .		0
85	Selfâ€Assembly: Reversible and Irreversible Modulation of Tubulin Selfâ€Assembly by Intense Nanosecond Pulsed Electric Fields (Adv. Mater. 39/2019). Advanced Materials, 2019, 31, 1970280.	11.1	0
86	Monitoring of Hydroxyl Radical Induced Oxidation of Yeast Cells Using Biological Autoluminescence. , 2019, , .		0
87	Modulation of Microtubule Systems by Intense Nanosecond Electric Pulses. Biophysical Journal, 2021, 120, 24a.	0.2	0
88	Molecular dynamics simulation dataset of a microtubule ring in electric field. Data in Brief, 2021, 38, 107337.	0.5	0
89	Measurement of Temperature Synchronized Yeast Cells kHz Electrical Oscillations. IFMBE Proceedings, 2008, , 610-613.	0.2	0
90	Molecular understanding of electromagnetic field-biomatter interaction for rational bio/chemical sensing device design. , 2021, , .		0

#	Article	IF	Citations
91	Electro-Modulation of Tubulin Properties and Function. Methods in Molecular Biology, 2022, 2430, 61-70.	0.4	0