

Ivo Provazník

List of Publications by Year in descending order

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Version: 2024-02-01

120
papers

2,613
citations

257101

24
h-index

205818

48
g-index

128
all docs

128
docs citations

128
times ranked

4126
citing authors

#	ARTICLE	IF	CITATIONS
1	Computer Aided Drug Design: Success and Limitations. <i>Current Pharmaceutical Design</i> , 2016, 22, 572-581.	0.9	281
2	Mammalian metallothioneins: properties and functions. <i>Metallomics</i> , 2012, 4, 739.	1.0	212
3	Sleep scoring using artificial neural networks. <i>Sleep Medicine Reviews</i> , 2012, 16, 251-263.	3.8	185
4	Electrospinning over Solvent Casting: Tuning of Mechanical Properties of Membranes. <i>Scientific Reports</i> , 2018, 8, 5058.	1.6	139
5	Fully Automated Spectrometric Protocols for Determination of Antioxidant Activity: Advantages and Disadvantages. <i>Molecules</i> , 2010, 15, 8618-8640.	1.7	117
6	Content of Phenolic Compounds and Antioxidant Capacity in Fruits of Apricot Genotypes. <i>Molecules</i> , 2010, 15, 6285-6305.	1.7	116
7	Bioinformatics strategies for taxonomy independent binning and visualization of sequences in shotgun metagenomics. <i>Computational and Structural Biotechnology Journal</i> , 2017, 15, 48-55.	1.9	106
8	Adaptive Wavelet Wiener Filtering of ECG Signals. <i>IEEE Transactions on Biomedical Engineering</i> , 2013, 60, 437-445.	2.5	103
9	Serum and Tissue Zinc in Epithelial Malignancies: A Meta-Analysis. <i>PLoS ONE</i> , 2014, 9, e99790.	1.1	82
10	Physiology and methodology of chromium toxicity using alga <i>Scenedesmus quadricauda</i> as model object. <i>Chemosphere</i> , 2015, 120, 23-30.	4.2	61
11	From Na ⁺ /K ⁺ -ATPase and Cardiac Glycosides to Cytotoxicity and Cancer Treatment. <i>Anti-Cancer Agents in Medicinal Chemistry</i> , 2013, 13, 1069-1087.	0.9	61
12	Effect of Five Different Stages of Ripening on Chemical Compounds in Medlar (<i>Mespilus germanica</i> L.). <i>Molecules</i> , 2011, 16, 74-91.	1.7	59
13	Acidogenesis, solventogenesis, metabolic stress response and life cycle changes in <i>Clostridium beijerinckii</i> NRRL B-598 at the transcriptomic level. <i>Scientific Reports</i> , 2019, 9, 1371.	1.6	48
14	Comparative analysis of high butanol tolerance and production in clostridia. <i>Biotechnology Advances</i> , 2018, 36, 721-738.	6.0	46
15	Classification of genomic signals using dynamic time warping. <i>BMC Bioinformatics</i> , 2013, 14, S1.	1.2	45
16	Real-Time Quality Assessment of Long-Term ECG Signals Recorded by Wearables in Free-Living Conditions. <i>IEEE Transactions on Biomedical Engineering</i> , 2020, 67, 2721-2734.	2.5	45
17	Electrophoretic fingerprint metallothionein analysis as a potential prostate cancer biomarker. <i>Electrophoresis</i> , 2011, 32, 1952-1961.	1.3	39
18	Mathematical Evaluation of the Amino Acid and Polyphenol Content and Antioxidant Activities of Fruits from Different Apricot Cultivars. <i>Molecules</i> , 2011, 16, 7428-7457.	1.7	38

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19	Phytotoxic action of naphthoquinone juglone demonstrated on lettuce seedling roots. <i>Plant Physiology and Biochemistry</i> , 2014, 84, 78-86.	2.8	38
20	Characterization of Microbiota Composition and Presence of Selected Antibiotic Resistance Genes in Carriage Water of Ornamental Fish. <i>PLoS ONE</i> , 2014, 9, e103865.	1.1	37
21	Dam and Dcm methylations prevent gene transfer into <i>Clostridium pasteurianum</i> NRRL B-598: development of methods for electrotransformation, conjugation, and sonoporation. <i>Biotechnology for Biofuels</i> , 2016, 9, 14.	6.2	35
22	Virtual screening, ADMET profiling, molecular docking and dynamics approaches to search for potent selective natural molecules based inhibitors against metallothionein-III to study Alzheimer's disease. <i>Methods</i> , 2015, 83, 105-110.	1.9	34
23	Isolated heart models: cardiovascular system studies and technological advances. <i>Medical and Biological Engineering and Computing</i> , 2015, 53, 669-678.	1.6	29
24	Effect of sodium humate and zinc oxide used in prophylaxis of post-weaning diarrhoea on faecal microbiota composition in weaned piglets. <i>Veterinarni Medicina</i> , 2016, 61, 328-336.	0.2	29
25	Reclassification of non-type strain <i>Clostridium pasteurianum</i> NRRL B-598 as <i>Clostridium beijerinckii</i> NRRL B-598. <i>Journal of Biotechnology</i> , 2017, 244, 1-3.	1.9	25
26	Antioxidant, Antimicrobial Activity and Medicinal Properties of <i>Grewia asiatica</i> L.. <i>Medicinal Chemistry</i> , 2016, 12, 211-216.	0.7	25
27	Progressive alignment of genomic signals by multiple dynamic time warping. <i>Journal of Theoretical Biology</i> , 2015, 385, 20-30.	0.8	24
28	Complete genome sequence of <i>Clostridium pasteurianum</i> NRRL B-598, a non-type strain producing butanol. <i>Journal of Biotechnology</i> , 2015, 214, 113-114.	1.9	24
29	Effect of fluoranthene on plant cell model: Tobacco BY-2 suspension culture. <i>Environmental and Experimental Botany</i> , 2012, 78, 117-126.	2.0	23
30	Structural changes in metallothionein isoforms revealed by capillary electrophoresis and Brdicka reaction. <i>Electrophoresis</i> , 2012, 33, 270-279.	1.3	22
31	Investigation of interaction between magnetic silica particles and lambda phage DNA fragment. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2013, 86, 65-72.	1.4	22
32	Wavelet transform in electrocardiography data compression. <i>International Journal of Medical Informatics</i> , 1997, 45, 111-128.	1.6	21
33	DNA hypomethylation concomitant with the overproduction of ROS induced by naphthoquinone juglone on tobacco BY-2 suspension cells. <i>Environmental and Experimental Botany</i> , 2015, 113, 28-39.	2.0	21
34	The extraction of the new components from electrogastrogram (EGG), using both adaptive filtering and electrocardiographic (ECG) derived respiration signal. <i>BioMedical Engineering OnLine</i> , 2015, 14, 60.	1.3	20
35	Transcriptional analysis of amino acid, metal ion, vitamin and carbohydrate uptake in butanol-producing <i>Clostridium beijerinckii</i> NRRL B-598. <i>PLoS ONE</i> , 2019, 14, e0224560.	1.1	19
36	Nanotechnologies for society. New designs and applications of nanosensors and nanobiosensors in medicine and environmental analysis. <i>International Journal of Nanotechnology</i> , 2012, 9, 746.	0.1	18

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37	A transcriptional response of <i>Clostridium beijerinckii</i> NRRL B-598 to a butanol shock. <i>Biotechnology for Biofuels</i> , 2019, 12, 243.	6.2	18
38	A Deformable Registration Method for Automated Morphometry of MRI Brain Images in Neuropsychiatric Research. <i>IEEE Transactions on Medical Imaging</i> , 2007, 26, 452-461.	5.4	17
39	Transcription profiling of butanol producer <i>Clostridium beijerinckii</i> NRRL B-598 using RNA-Seq. <i>BMC Genomics</i> , 2018, 19, 415.	1.2	17
40	Transcriptional profiling of murine osteoblast differentiation based on RNA-seq expression analyses. <i>Bone</i> , 2018, 113, 29-40.	1.4	13
41	Development and Characterization of Natural Product Derived Macromolecules Based Interpenetrating Polymer Network for Therapeutic Drug Targeting. <i>ACS Omega</i> , 2021, 6, 28699-28709.	1.6	13
42	Identification of positively selected genes in human pathogenic treponemes: Syphilis-, yaws-, and bejel-causing strains differ in sets of genes showing adaptive evolution. <i>PLoS Neglected Tropical Diseases</i> , 2019, 13, e0007463.	1.3	12
43	Draft Genome Sequence of <i>Clostridium pasteurianum</i> NRRL B-598, a Potential Butanol or Hydrogen Producer. <i>Genome Announcements</i> , 2014, 2, .	0.8	11
44	Set of rules for genomic signal downsampling. <i>Computers in Biology and Medicine</i> , 2016, 69, 308-314.	3.9	11
45	The effect of Benzothiazolone on the expression of Metallothionein in modulating Alzheimer's disease. <i>Brain and Behavior</i> , 2017, 7, e00799.	1.0	11
46	Rhodamine bound maghemite as a long-term dual imaging nanoprobe of adipose tissue-derived mesenchymal stromal cells. <i>European Biophysics Journal</i> , 2017, 46, 433-444.	1.2	11
47	Characteristics of motion artifacts in cardiac optical mapping studies. , 2009, 2009, 3240-3.		10
48	Transfection by Polyethyleneimine-Coated Magnetic Nanoparticles: Fine-Tuning the Condition for Electrophysiological Experiments. <i>Journal of Biomedical Nanotechnology</i> , 2018, 14, 1505-1514.	0.5	10
49	Clozapine Reverses Dysfunction of Glutamatergic Neurons Derived From Clozapine-Responsive Schizophrenia Patients. <i>Frontiers in Cellular Neuroscience</i> , 2022, 16, 830757.	1.8	10
50	A comparative tool for the validity of rate kinetics in ion channels by Onsager reciprocity theorem. <i>Journal of Theoretical Biology</i> , 2005, 233, 237-243.	0.8	9
51	Bipartite Graphs for Visualization Analysis of Microbiome Data. <i>Evolutionary Bioinformatics</i> , 2016, 12s1, EBO.S38546.	0.6	9
52	Simultaneous study of mechanobiology and calcium dynamics on hESC-derived cardiomyocytes clusters. <i>Journal of Molecular Recognition</i> , 2019, 32, e2760.	1.1	9
53	Phenotypic and genomic analysis of isopropanol and 1,3-propanediol producer <i>Clostridium diolis</i> DSM 15410. <i>Genomics</i> , 2021, 113, 1109-1119.	1.3	9
54	Use of whole genome DNA spectrograms in bacterial classification. <i>Computers in Biology and Medicine</i> , 2016, 69, 298-307.	3.9	8

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55	SVM Based ECG Classification Using Rhythm and Morphology Features, Cluster Analysis and Multilevel Noise Estimation. , 0, , .		8
56	A new approach to define dynamics of the ion channel gates. <i>NeuroReport</i> , 2004, 15, 335-338.	0.6	7
57	Cell toxicity and preparation of streptavidin-modified iron nanoparticles and glutathione-modified cadmium-based quantum dots. <i>Procedia Engineering</i> , 2010, 5, 922-925.	1.2	7
58	Isolation of Xis Gen Fragment of λ Phage from Agarose Gel Using Magnetic Particles for Subsequent Enzymatic DNA Sequencing. <i>Chromatographia</i> , 2013, 76, 329-334.	0.7	7
59	Fast time-varying linear filters for suppression of baseline drift in electrocardiographic signals. <i>BioMedical Engineering OnLine</i> , 2017, 16, 24.	1.3	7
60	<i>In silico</i> screening and molecular dynamics of phytochemicals from Indian cuisine against SARS-CoV-2 M ^{Pro} . <i>Journal of Biomolecular Structure and Dynamics</i> , 2022, 40, 3155-3169.	2.0	7
61	Paramagnetic antibody-modified microparticles coupled with voltammetry as a tool for isolation and detection of metallothionein as a bioindicator of metal pollution. <i>Journal of Environmental Monitoring</i> , 2011, 13, 2763.	2.1	6
62	A New Approach how to Define the Coefficient of Electroactivity of Adenine and Its Twelve Derivatives Using Flow Injection Analysis with Amperometric Detection. <i>Electroanalysis</i> , 2011, 23, 1556-1567.	1.5	6
63	Multi-Electrode Array with a Planar Surface for Cell Patterning by Microprinting. <i>Sensors</i> , 2019, 19, 5379.	2.1	6
64	Phenotypic and Genomic Analysis of <i>Clostridium beijerinckii</i> NRRL B-598 Mutants With Increased Butanol Tolerance. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 598392.	2.0	6
65	Transcriptomic studies of solventogenic clostridia, <i>Clostridium acetobutylicum</i> and <i>Clostridium beijerinckii</i> . <i>Biotechnology Advances</i> , 2022, 58, 107889.	6.0	6
66	Deeper below the surface transcriptional changes in selected genes of <i>Clostridium beijerinckii</i> in response to butanol shock. <i>MicrobiologyOpen</i> , 2021, 10, e1146.	1.2	5
67	Relationship of Bacteria Using Comparison of Whole Genome Sequences in Frequency Domain. <i>Advances in Intelligent Systems and Computing</i> , 2014, , 397-408.	0.5	5
68	Complete Genome Sequence of <i>Pragia fontium</i> 24613, an Environmental Bacterium from the Family <i>Enterobacteriaceae</i> . <i>Genome Announcements</i> , 2015, 3, .	0.8	4
69	Studying the Kinetics of n-Butyl-Cyanoacrylate Tissue Adhesive and Its Oily Mixtures. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2016, 37, 1043-1054.	1.2	4
70	Testing of features for fatigue detection in Δ EOG. <i>Bio-Medical Materials and Engineering</i> , 2017, 28, 379-392.	0.4	4
71	Identification and Validation of Reference Genes in <i>Clostridium beijerinckii</i> NRRL B-598 for RT-qPCR Using RNA-Seq Data. <i>Frontiers in Microbiology</i> , 2021, 12, 640054.	1.5	4
72	Di-4-ANEPPS Modulates Electrical Activity and Progress of Myocardial Ischemia in Rabbit Isolated Heart. <i>Frontiers in Physiology</i> , 2021, 12, 667065.	1.3	4

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73	PhytoAFP: In Silico Approaches for Designing Plant-Derived Antifungal Peptides. <i>Antibiotics</i> , 2021, 10, 815.	1.5	4
74	Tolerance of Isolated Rabbit Hearts to Short Ischemic Periods Is Affected by Increased LV Mass Fraction. <i>Physiological Research</i> , 2017, 66, 581-589.	0.4	4
75	Cancer cell viscoelasticity measurement by quantitative phase and flow stress induction. <i>Biophysical Journal</i> , 2022, 121, 1632-1642.	0.2	4
76	Detection of short exons in DNA sequences using complex wavelet transform of structural features. , 2012, , .		3
77	Classification of ventricular premature and ischemic beats in animal electrograms. , 2015, , .		3
78	Self-supervised pretraining for transferable quantitative phase image cell segmentation. <i>Biomedical Optics Express</i> , 2021, 12, 6514.	1.5	3
79	Changes in efflux pump activity of <i>Clostridium beijerinckii</i> throughout ABE fermentation. <i>Applied Microbiology and Biotechnology</i> , 2021, 105, 877-889.	1.7	3
80	The effect of voltage-sensitive dye di-4-ANEPPS on heart rate variability in Langendorff-perfused isolated rabbit heart. , 2015, , .		2
81	Computer analysis of isolated cardiomyocyte contraction process via advanced image processing techniques. , 2015, , .		2
82	Terahertz Time-Domain Spectroscopy for Studying Absorbable Hemostats. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2016, 6, 420-426.	2.0	2
83	Free-Living <i>Enterobacterium pragia fontium</i> 24613: Complete Genome Sequence and Metabolic Profiling. <i>Evolutionary Bioinformatics</i> , 2017, 13, 117693431770086.	0.6	2
84	The Effect of Rhodamine-Derived Superparamagnetic Maghemite Nanoparticles on the Motility of Human Mesenchymal Stem Cells and Mouse Embryonic Fibroblast Cells. <i>Molecules</i> , 2019, 24, 1192.	1.7	2
85	Delineation of ECG Waves Using Complex-Valued Continuous Wavelet Transform. <i>IFMBE Proceedings</i> , 2007, , 158-161.	0.2	2
86	An Evaluation of Different Coating for TiN Microelectrode Chambers Used for Neonatal Cardiomyocytes. , 0, , .		2
87	Time — Varying filters for ECG processing. , 1992, , .		1
88	Motive representation in nucleotide densities of bird's mitochondrial gene COX1. , 2011, , .		1
89	Systems for rapid simultaneous measurement of calcium transients and contractions of adult cardiomyocytes. , 2013, , .		1
90	Method for adult cardiomyocyte long-term viability monitoring using confocal microscopy techniques. , 2015, , .		1

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91	Bipartite graphs for metagenomic data analysis and visualization. , 2015, , .		1
92	Smartphone based point-of-care detector of urine albumin. , 2016, , .		1
93	Reference-free Identification of Phage DNA Using Signal Processing on Nanopore Data. , 2017, , .		1
94	Three-dimensional fluorescence lifetime imaging in confocal microscopy of living cells. , 2017, , .		1
95	DNA Intracellular Delivery into 3T3 Cell Line Using Fluorescence Magnetic Ferumoxide Nanoparticles. IFMBE Proceedings, 2019, , 149-153.	0.2	1
96	Exploring the Therapeutic Effects of Micro-pulse Stimulation. Lecture Notes in Electrical Engineering, 2018, , 21-27.	0.3	1
97	Micro-pulse Stimulation. Lecture Notes in Electrical Engineering, 2018, , 13-19.	0.3	1
98	The Effect of Haloperidol Administration on Heart Rate Variability in Isolated Heart of Schizophrenia-like and Control Rats. , 0, , .		1
99	Similarity/dissimilarity analysis of COI mitochondrial gene of chosen bird species based on nucleotide density. , 2010, , .		0
100	Similarity analysis of primary and secondary structures of metallothioneins. , 2010, , .		0
101	Virtual screening, ADMET profiling, molecular docking and dynamics approaches to search for potent selective natural molecule based inhibitors against metallothionein-III to study Alzheimer's disease. , 2014, , .		0
102	In-Silico Characterization of Human Metallothionein (MT-1E) and Its Role in Prevention and Therapy of Bladder Cancer with Dietary Agents. , 2014, , .		0
103	The frequency changes in electrograms during ischemia experiments - analysis by Matching Pursuit decomposition. , 2015, , .		0
104	Characterization of cells migration through cardiac tissue using advanced microscopy techniques and matlab simulation. , 2015, , .		0
105	Voltage sensitive dye di-4-ANNEPS prolongs impulse conduction through ventricles, but not through AV node in isolated rabbit heart. , 2015, , .		0
106	Terahertz time-domain spectroscopy for studying the kinetics of tissue adhesives. Proceedings of SPIE, 2015, , .	0.8	0
107	All-in-one detector of circulating mRNA based on a smartphone. , 2016, , .		0
108	Electrical Stimulation of ASAP1 with a Combination of Microelectrode Array and Fluorescent Techniques. , 2018, , .		0

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109	Modern Semi-automatic Set-up for Testing Cell Migration with Impact for Therapy of Myocardial Infarction. IFMBE Proceedings, 2019, , 155-159.	0.2	0
110	Method for Analysis of Excitation-Emission Spectral Scans to Characterize Fluorescent Probes in Confocal Microscopy. Microscopy and Microanalysis, 2019, 25, 1264-1265.	0.2	0
111	Influence of sample variance on the phylogenetic reconstruction of protein sequences. , 2011, , .		0
112	Application of Advanced Spectral Analysis for Rehabilitation Progress Estimation Concerning Patients after Ischemic Brain Stroke. International Journal of Bioscience, Biochemistry, Bioinformatics (IJBBB), 2014, 4, 82-85.	0.2	0
113	The Effect of Cardiac Filling on Heart Rate Variability in Rabbit Isolated Heart. , 0, , .		0
114	Simultaneous Electrical and Fluorescence Recording of HL-1 Cells Electrical Activity in Response to Extracellular Calcium Stimulation. , 0, , .		0
115	UPGRADE OF THE LANGENDORFF APPARATUS USING THE INFRARED THERMO-CONTROL SYSTEM AND AN INTELLIGENT HEATER. Lekar A Technika, 2020, 50, 137-141.	0.1	0
116	Title is missing!. , 2019, 14, e0224560.		0
117	Title is missing!. , 2019, 14, e0224560.		0
118	Title is missing!. , 2019, 14, e0224560.		0
119	Title is missing!. , 2019, 14, e0224560.		0
120	Classification of First-Episode Schizophrenia Using Wavelet Imaging Features. Studies in Health Technology and Informatics, 2020, 270, 1221-1222.	0.2	0