

Ivo ProvaznÅ-k

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	<i>In silico</i> screening and molecular dynamics of phytochemicals from Indian cuisine against SARS-CoV-2 M ^{Pro} . Journal of Biomolecular Structure and Dynamics, 2022, 40, 3155-3169.	2.0	7
2	Clozapine Reverses Dysfunction of Glutamatergic Neurons Derived From Clozapine-Responsive Schizophrenia Patients. Frontiers in Cellular Neuroscience, 2022, 16, 830757.	1.8	10
3	Cancer cell viscoelasticity measurement by quantitative phase and flow stress induction. Biophysical Journal, 2022, 121, 1632-1642.	0.2	4
4	Transcriptomic studies of solventogenic clostridia, Clostridium acetobutylicum and Clostridium beijerinckii. Biotechnology Advances, 2022, 58, 107889.	6.0	6
5	Phenotypic and genomic analysis of isopropanol and 1,3-propanediol producer Clostridium diolis DSM 15410. Genomics, 2021, 113, 1109-1119.	1.3	9
6	Identification and Validation of Reference Genes in Clostridium beijerinckii NRRL B-598 for RT-qPCR Using RNA-Seq Data. Frontiers in Microbiology, 2021, 12, 640054.	1.5	4
7	Di-4-ANEPPS Modulates Electrical Activity and Progress of Myocardial Ischemia in Rabbit Isolated Heart. Frontiers in Physiology, 2021, 12, 667065.	1.3	4
8	PhytoAFP: In Silico Approaches for Designing Plant-Derived Antifungal Peptides. Antibiotics, 2021, 10, 815.	1.5	4
9	Self-supervised pretraining for transferable quantitative phase image cell segmentation. Biomedical Optics Express, 2021, 12, 6514.	1.5	3
10	Changes in efflux pump activity of Clostridium beijerinckii throughout ABE fermentation. Applied Microbiology and Biotechnology, 2021, 105, 877-889.	1.7	3
11	Deeper below the surface transcriptional changes in selected genes of Clostridium beijerinckii in response to butanol shock. MicrobiologyOpen, 2021, 10, e1146.	1.2	5
12	Development and Characterization of Natural Product Derived Macromolecules Based Interpenetrating Polymer Network for Therapeutic Drug Targeting. ACS Omega, 2021, 6, 28699-28709.	1.6	13
13	Phenotypic and Genomic Analysis of Clostridium beijerinckii NRRL B-598 Mutants With Increased Butanol Tolerance. Frontiers in Bioengineering and Biotechnology, 2020, 8, 598392.	2.0	6
14	Real-Time Quality Assessment of Long-Term ECG Signals Recorded by Wearables in Free-Living Conditions. IEEE Transactions on Biomedical Engineering, 2020, 67, 2721-2734.	2.5	45
15	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
16	Classification of First-Episode Schizophrenia Using Wavelet Imaging Features. Studies in Health Technology and Informatics, 2020, 270, 1221-1222.	0.2	0
17	Modern Semi-automatic Set-up for Testing Cell Migration with Impact for Therapy of Myocardial Infarction. IFMBE Proceedings, 2019, , 155-159.	0.2	0
18	Simultaneous study of mechanobiology and calcium dynamics on hESC-derived cardiomyocytes clusters. Journal of Molecular Recognition, 2019, 32, e2760.	1.1	9

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19	DNA Intracellular Delivery into 3T3 Cell Line Using Fluorescence Magnetic Ferumoxide Nanoparticles. IFMBE Proceedings, 2019, , 149-153.	0.2	1
20	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
21	Transcriptional analysis of amino acid, metal ion, vitamin and carbohydrate uptake in butanol-producing Clostridium beijerinckii NRRL B-598. PLoS ONE, 2019, 14, e0224560.	1.1	19
22	A transcriptional response of Clostridium beijerinckii NRRL B-598 to a butanol shock. Biotechnology for Biofuels, 2019, 12, 243.	6.2	18
23	Identification of positively selected genes in human pathogenic treponemes: Syphilis-, yaws-, and bejel-causing strains differ in sets of genes showing adaptive evolution. PLoS Neglected Tropical Diseases, 2019, 13, e0007463.	1.3	12
24	The Effect of Rhodamine-Derived Superparamagnetic Maghemite Nanoparticles on the Motility of Human Mesenchymal Stem Cells and Mouse Embryonic Fibroblast Cells. Molecules, 2019, 24, 1192.	1.7	2
25	Acidogenesis, solventogenesis, metabolic stress response and life cycle changes in Clostridium beijerinckii NRRL B-598 at the transcriptomic level. Scientific Reports, 2019, 9, 1371.	1.6	48
26	Multi-Electrode Array with a Planar Surface for Cell Patterning by Microprinting. Sensors, 2019, 19, 5379.	2.1	6
27	Title is missing!. , 2019, 14, e0224560.		0
28	Title is missing!. , 2019, 14, e0224560.		0
29	Title is missing!. , 2019, 14, e0224560.		0
30	Title is missing!. , 2019, 14, e0224560.		0
31	Transcriptional profiling of murine osteoblast differentiation based on RNA-seq expression analyses. Bone, 2018, 113, 29-40.	1.4	13
32	Comparative analysis of high butanol tolerance and production in clostridia. Biotechnology Advances, 2018, 36, 721-738.	6.0	46
33	Electrospinning over Solvent Casting: Tuning of Mechanical Properties of Membranes. Scientific Reports, 2018, 8, 5058.	1.6	139
34	Electrical Stimulation of ASAP1 with a Combination of Microelectrode Array and Fluorescent Techniques. , 2018, , .		0
35	Transcription profiling of butanol producer Clostridium beijerinckii NRRL B-598 using RNA-Seq. BMC Genomics, 2018, 19, 415.	1.2	17
36	Transfection by Polyethyleneimine-Coated Magnetic Nanoparticles: Fine-Tuning the Condition for Electrophysiological Experiments. Journal of Biomedical Nanotechnology, 2018, 14, 1505-1514.	0.5	10

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37	Exploring the Therapeutic Effects of Micro-pulse Stimulation. Lecture Notes in Electrical Engineering, 2018, , 21-27.	0.3	1
38	Micro-pulse Stimulation. Lecture Notes in Electrical Engineering, 2018, , 13-19.	0.3	1
39	Fast time-varying linear filters for suppression of baseline drift in electrocardiographic signals. BioMedical Engineering OnLine, 2017, 16, 24.	1.3	7
40	Reclassification of non-type strain Clostridium pasteurianum NRRL B-598 as Clostridium beijerinckii NRRL B-598. Journal of Biotechnology, 2017, 244, 1-3.	1.9	25
41	Bioinformatics strategies for taxonomy independent binning and visualization of sequences in shotgun metagenomics. Computational and Structural Biotechnology Journal, 2017, 15, 48-55.	1.9	106
42	The effect of Benzothiazolone on the expression of Metallothionein in modulating Alzheimer's disease. Brain and Behavior, 2017, 7, e00799.	1.0	11
43	Testing of features for fatigue detection in EEG. Bio-Medical Materials and Engineering, 2017, 28, 379-392.	0.4	4
44	Rhodamine bound maghemite as a long-term dual imaging nanoprobe of adipose tissue-derived mesenchymal stromal cells. European Biophysics Journal, 2017, 46, 433-444.	1.2	11
45	Reference-free Identification of Phage DNA Using Signal Processing on Nanopore Data. , 2017, , .		1
46	Three-dimensional fluorescence lifetime imaging in confocal microscopy of living cells. , 2017, , .		1
47	Free-Living Enterobacterium <i>Pragia fontium</i> 24613: Complete Genome Sequence and Metabolic Profiling. Evolutionary Bioinformatics, 2017, 13, 117693431770086.	0.6	2
48	Tolerance of Isolated Rabbit Hearts to Short Ischemic Periods Is Affected by Increased LV Mass Fraction. Physiological Research, 2017, 66, 581-589.	0.4	4
49	Effect of sodium humate and zinc oxide used in prophylaxis of post-weaning diarrhoea on faecal microbiota composition in weaned piglets. Veterinarni Medicina, 2016, 61, 328-336.	0.2	29
50	Bipartite Graphs for Visualization Analysis of Microbiome Data. Evolutionary Bioinformatics, 2016, 12s1, EBO.S38546.	0.6	9
51	Studying the Kinetics of n-Butyl-Cyanoacrylate Tissue Adhesive and Its Oily Mixtures. Journal of Infrared, Millimeter, and Terahertz Waves, 2016, 37, 1043-1054.	1.2	4
52	Terahertz Time-Domain Spectroscopy for Studying Absorbable Hemostats. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 420-426.	2.0	2
53	Dam and Dcm methylations prevent gene transfer into Clostridium pasteurianum NRRL B-598: development of methods for electrotransformation, conjugation, and sonoporation. Biotechnology for Biofuels, 2016, 9, 14.	6.2	35
54	Use of whole genome DNA spectrograms in bacterial classification. Computers in Biology and Medicine, 2016, 69, 298-307.	3.9	8

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55	Smartphone based point-of-care detector of urine albumin. , 2016, , .		1
56	All-in-one detector of circulating mRNA based on a smartphone. , 2016, , .		0
57	Set of rules for genomic signal downsampling. Computers in Biology and Medicine, 2016, 69, 308-314.	3.9	11
58	Computer Aided Drug Design: Success and Limitations. Current Pharmaceutical Design, 2016, 22, 572-581.	0.9	281
59	Antioxidant, Antimicrobial Activity and Medicinal Properties of <i>Grewia asiatica</i> L.. Medicinal Chemistry, 2016, 12, 211-216.	0.7	25
60	The frequency changes in electrograms during ischemia experiments - analysis by Matching Pursuit decomposition. , 2015, , .		0
61	The effect of voltage-sensitive dye di-4-ANEPPS on heart rate variability in Langendorff-perfused isolated rabbit heart. , 2015, , .		2
62	The extraction of the new components from electrogastrogram (EGG), using both adaptive filtering and electrocardiographic (ECG) derived respiration signal. BioMedical Engineering OnLine, 2015, 14, 60.	1.3	20
63	Classification of ventricular premature and ischemic beats in animal electrograms. , 2015, , .		3
64	Characterization of cells migration through cardiac tissue using advanced microscopy techniques and matlab simulation. , 2015, , .		0
65	Voltage sensitive dye di-4-ANNEPS prolongs impulse conduction through ventricles, but not through AV node in isolated rabbit heart. , 2015, , .		0
66	Complete Genome Sequence of <i>Pragia fontium</i> 24613, an Environmental Bacterium from the Family <i>Enterobacteriaceae</i> . Genome Announcements, 2015, 3, .	0.8	4
67	Method for adult cardiomyocyte long-term viability monitoring using confocal microscopy techniques. , 2015, , .		1
68	Computer analysis of isolated cardiomyocyte contraction process via advanced image processing techniques. , 2015, , .		2
69	Terahertz time-domain spectroscopy for studying the kinetics of tissue adhesives. Proceedings of SPIE, 2015, , .	0.8	0
70	Bipartite graphs for metagenomic data analysis and visualization. , 2015, , .		1
71	DNA hypomethylation concomitant with the overproduction of ROS induced by naphthoquinone juglone on tobacco BY-2 suspension cells. Environmental and Experimental Botany, 2015, 113, 28-39.	2.0	21
72	Isolated heart models: cardiovascular system studies and technological advances. Medical and Biological Engineering and Computing, 2015, 53, 669-678.	1.6	29

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73	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
74	Progressive alignment of genomic signals by multiple dynamic time warping. <i>Journal of Theoretical Biology</i> , 2015, 385, 20-30.	0.8	24
75	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
76	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
77	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
78	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
79	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
80	In-Silico Characterization of Human Metallothionein (MT-1E) and Its Role in Prevention and Therapy of Bladder Cancer with Dietary Agents. , 2014, , .		0
81	Phytotoxic action of naphthoquinone juglone demonstrated on lettuce seedling roots. <i>Plant Physiology and Biochemistry</i> , 2014, 84, 78-86.	2.8	38
82	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
83	Serum and Tissue Zinc in Epithelial Malignancies: A Meta-Analysis. <i>PLoS ONE</i> , 2014, 9, e99790.	1.1	82
84	Application of Advanced Spectral Analysis for Rehabilitation Progress Estimation Concerning Patients after Ischemic Brain Stroke. <i>International Journal of Bioscience, Biochemistry, Bioinformatics (IJBBB)</i> , 2014, 4, 82-85.	0.2	0
85	Classification of genomic signals using dynamic time warping. <i>BMC Bioinformatics</i> , 2013, 14, S1.	1.2	45
86	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
87	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
88	Adaptive Wavelet Wiener Filtering of ECG Signals. <i>IEEE Transactions on Biomedical Engineering</i> , 2013, 60, 437-445.	2.5	103
89	Systems for rapid simultaneous measurement of calcium transients and contractions of adult cardiomyocytes. , 2013, , .		1
90	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

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91	Detection of short exons in DNA sequences using complex wavelet transform of structural features. , 2012, , .		3
92	Nanotechnologies for society. New designs and applications of nanosensors and nanobiosensors in medicine and environmental analysis. International Journal of Nanotechnology, 2012, 9, 746.	0.1	18
93	Sleep scoring using artificial neural networks. Sleep Medicine Reviews, 2012, 16, 251-263.	3.8	185
94	Mammalian metallothioneins: properties and functions. Metallomics, 2012, 4, 739.	1.0	212
95	Effect of fluoranthene on plant cell model: Tobacco BY-2 suspension culture. Environmental and Experimental Botany, 2012, 78, 117-126.	2.0	23
96	Structural changes in metallothionein isoforms revealed by capillary electrophoresis and Brdicka reaction. Electrophoresis, 2012, 33, 270-279.	1.3	22
97	Paramagnetic antibody-modified microparticles coupled with voltammetry as a tool for isolation and detection of metallothionein as a bioindicator of metal pollution. Journal of Environmental Monitoring, 2011, 13, 2763.	2.1	6
98	Motive representation in nucleotide densities of bird's mitochondrial gene COX1. , 2011, , .		1
99	Mathematical Evaluation of the Amino Acid and Polyphenol Content and Antioxidant Activities of Fruits from Different Apricot Cultivars. Molecules, 2011, 16, 7428-7457.	1.7	38
100	Effect of Five Different Stages of Ripening on Chemical Compounds in Medlar (<i>Mespilus germanica</i> L.). Molecules, 2011, 16, 74-91.	1.7	59
101	A New Approach how to Define the Coefficient of Electroactivity of Adenine and Its Twelve Derivatives Using Flow Injection Analysis with Amperometric Detection. Electroanalysis, 2011, 23, 1556-1567.	1.5	6
102	Electrophoretic fingerprint metallothionein analysis as a potential prostate cancer biomarker. Electrophoresis, 2011, 32, 1952-1961.	1.3	39
103	Influence of sample variance on the phylogenetic reconstruction of protein sequences. , 2011, , .		0
104	Cell toxicity and preparation of streptavidin-modified iron nanoparticles and glutathione-modified cadmium-based quantum dots. Procedia Engineering, 2010, 5, 922-925.	1.2	7
105	Content of Phenolic Compounds and Antioxidant Capacity in Fruits of Apricot Genotypes. Molecules, 2010, 15, 6285-6305.	1.7	116
106	Fully Automated Spectrometric Protocols for Determination of Antioxidant Activity: Advantages and Disadvantages. Molecules, 2010, 15, 8618-8640.	1.7	117
107	Similarity/dissimilarity analysis of COI mitochondrial gene of chosen bird species based on nucleotide density. , 2010, , .		0
108	Similarity analysis of primary and secondary structures of metallothioneins. , 2010, , .		0

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109	Characteristics of motion artifacts in cardiac optical mapping studies. , 2009, 2009, 3240-3.		10
110	A Deformable Registration Method for Automated Morphometry of MRI Brain Images in Neuropsychiatric Research. IEEE Transactions on Medical Imaging, 2007, 26, 452-461.	5.4	17
111	Delineation of ECG Waves Using Complex-Valued Continuous Wavelet Transform. IFMBE Proceedings, 2007, , 158-161.	0.2	2
112	A comparative tool for the validity of rate kinetics in ion channels by Onsager reciprocity theorem. Journal of Theoretical Biology, 2005, 233, 237-243.	0.8	9
113	A new approach to define dynamics of the ion channel gates. NeuroReport, 2004, 15, 335-338.	0.6	7
114	Wavelet transform in electrocardiographyâ€”data compression. International Journal of Medical Informatics, 1997, 45, 111-128.	1.6	21
115	Time — Varying filters for ECG processing. , 1992, , .		1
116	SVM Based ECG Classification Using Rhythm and Morphology Features, Cluster Analysis and Multilevel Noise Estimation. , 0, , .		8
117	The Effect of Cardiac Filling on Heart Rate Variability in Rabbit Isolated Heart. , 0, , .		0
118	An Evaluation of Different Coating for TiN Microelectrode Chambers Used for Neonatal Cardiomyocytes. , 0, , .		2
119	The Effect of Haloperidol Administration on Heart Rate Variability in Isolated Heart of Schizophrenia-like and Control Rats. , 0, , .		1
120	Simultaneous Electrical and Fluorescence Recording of HL-1 Cells Electrical Activity in Response to Extracellular Calcium Stimulation. , 0, , .		0