

Jan Vacek

List of Publications by Year in descending order

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97
papers

2,661
citations

186265

28
h-index

214800

47
g-index

102
all docs

102
docs citations

102
times ranked

3539
citing authors

#	ARTICLE	IF	CITATIONS
1	Serum albumin as a primary non-covalent binding protein for nitro-oleic acid. <i>International Journal of Biological Macromolecules</i> , 2022, 203, 116-129.	7.5	13
2	Cyclopentenedione-based ascorbate-rejecting permselective layers prepared by electropolymerization. <i>Journal of Electroanalytical Chemistry</i> , 2022, 912, 116261.	3.8	2
3	Cannabidiol and periodontal inflammatory disease: A critical assessment. <i>Biomedical Papers of the Medical Faculty of the University Palacký&#x0301;, Olomouc, Czechoslovakia</i> , 2022, 166, 155-160.	0.6	6
4	Free and bound histidine in reactions at mercury electrode. <i>Journal of Electroanalytical Chemistry</i> , 2022, 916, 116336.	3.8	4
5	Electrophilic characteristics and aqueous behavior of fatty acid nitroalkenes. <i>Redox Biology</i> , 2021, 38, 101756.	9.0	20
6	Antioxidant function of phytocannabinoids: Molecular basis of their stability and cytoprotective properties under UV-irradiation. <i>Free Radical Biology and Medicine</i> , 2021, 164, 258-270.	2.9	27
7	Cysteamine assay for the evaluation of bioactive electrophiles. <i>Free Radical Biology and Medicine</i> , 2021, 164, 381-389.	2.9	5
8	Flavin–Helicene Amphiphilic Hybrids: Synthesis, Characterization, and Preparation of Surface–Supported Films. <i>ChemPlusChem</i> , 2021, 86, 982-990.	2.8	3
9	CBD is not converted to THC in rats: A framework interpretation and discussion. <i>European Neuropsychopharmacology</i> , 2021, 50, 135-136.	0.7	3
10	Cubosomal lipid formulation of nitroalkene fatty acids: Preparation, stability and biological effects. <i>Redox Biology</i> , 2021, 46, 102097.	9.0	5
11	Chiral Electrochemistry: Anodic Deposition of Enantiopure Helical Molecules. <i>ChemPlusChem</i> , 2020, 85, 1954-1958.	2.8	8
12	Sensors and microarrays in protein biomarker monitoring: an electrochemical perspective spots. <i>Bioanalysis</i> , 2020, 12, 1337-1345.	1.5	6
13	Analytical techniques for multiplex analysis of protein biomarkers. <i>Expert Review of Proteomics</i> , 2020, 17, 257-273.	3.0	60
14	Redox and optically active carbohelicene layers prepared by potentiodynamic polymerization. <i>Electrochemistry Communications</i> , 2020, 113, 106689.	4.7	11
15	Diferulate: A highly effective electron donor. <i>Journal of Electroanalytical Chemistry</i> , 2020, 869, 113950.	3.8	3
16	Redox properties of individual quercetin moieties. <i>Free Radical Biology and Medicine</i> , 2019, 143, 240-251.	2.9	38
17	Structures of Peptidic H–wires at Mercury Surface: Molecular Dynamics Study. <i>Electroanalysis</i> , 2019, 31, 2032-2040.	2.9	4
18	Preparation and Physicochemical Properties of [6]Helicenes Fluorinated at Terminal Rings. <i>Journal of Organic Chemistry</i> , 2019, 84, 1980-1993.	3.2	30

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19	Redox properties and human serum albumin binding of nitro-oleic acid. <i>Redox Biology</i> , 2019, 24, 101213.	9.0	16
20	Electrochemistry of peptides. <i>Current Opinion in Electrochemistry</i> , 2019, 14, 166-172.	4.8	20
21	Cytotoxicity of hexahelicene and its effect on the aryl hydrocarbon receptor pathway. <i>Toxicology in Vitro</i> , 2019, 57, 105-109.	2.4	3
22	Carbon fiber on-line detector for monitoring human blood serum reductive capacity. A complex technical solution. <i>Journal of Electroanalytical Chemistry</i> , 2018, 814, 184-191.	3.8	5
23	Electrochemical behavior of sarco/endoplasmic reticulum Ca-ATPase in response to carbonylation processes. <i>Journal of Electroanalytical Chemistry</i> , 2018, 812, 258-264.	3.8	5
24	Metabolism of flavonolignans in human hepatocytes. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2018, 152, 94-101.	2.8	20
25	Anodic Deposition of Enantiopure Hexahelicene Layers. <i>ChemElectroChem</i> , 2018, 5, 2080-2088.	3.4	14
26	Electrocatalytic artificial carbonylation assay for observation of human serum albumin inter-individual properties. <i>Analytical Biochemistry</i> , 2018, 550, 137-143.	2.4	8
27	Electrochemistry of membrane proteins and protein-lipid assemblies. <i>Current Opinion in Electrochemistry</i> , 2018, 12, 73-80.	4.8	21
28	Electrochemistry and electron paramagnetic resonance spectroscopy of cytochrome c and its heme-disrupted analogs. <i>Bioelectrochemistry</i> , 2018, 119, 136-141.	4.6	12
29	Lipidic liquid crystalline cubic phases for preparation of ATP-hydrolysing enzyme electrodes. <i>Biosensors and Bioelectronics</i> , 2018, 100, 437-444.	10.1	14
30	Structural Stability of Peptidic His-Containing Proton Wire in Solution and in the Adsorbed State. <i>Langmuir</i> , 2018, 34, 6997-7005.	3.5	5
31	European contribution to the study of ROS: A summary of the findings and prospects for the future from the COST action BM1203 (EU-ROS). <i>Redox Biology</i> , 2017, 13, 94-162.	9.0	242
32	Na ⁺ /K ⁺ -ATPase interaction with methylglyoxal as reactive metabolic side product. <i>Free Radical Biology and Medicine</i> , 2017, 108, 146-154.	2.9	10
33	Novel flavonolignan hybrid antioxidants: From enzymatic preparation to molecular rationalization. <i>European Journal of Medicinal Chemistry</i> , 2017, 127, 263-274.	5.5	25
34	Oxidation of Natural Bioactive Flavonolignan 2,3-Dehydrosilybin: An Electrochemical and Spectral Study. <i>Journal of Physical Chemistry B</i> , 2017, 121, 6841-6846.	2.6	6
35	Potential-Driven On/Off Switch Strategy for the Electrosynthesis of [7]Helicene-Derived Polymers. <i>ChemElectroChem</i> , 2017, 4, 3047-3052.	3.4	7
36	Oxidation of the Flavonolignan Silybin. In situ EPR Evidence of the Spin-Trapped Silybin Radical. <i>Electrochimica Acta</i> , 2016, 205, 118-123.	5.2	12

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37	Flavonolignan Conjugates as DNA-binding Ligands and Topoisomerase I Inhibitors: Electrochemical and Electrophoretic Approaches. <i>Electroanalysis</i> , 2016, 28, 2866-2874.	2.9	8
38	Development of separation methods for the chiral resolution of hexahelicenes. <i>Journal of Chromatography A</i> , 2016, 1476, 130-134.	3.7	17
39	Semisynthetic flavonoid 7-O-galloylquercetin activates Nrf2 and induces Nrf2-dependent gene expression in RAW264.7 and Hepa1c1c7 cells. <i>Chemico-Biological Interactions</i> , 2016, 260, 58-66.	4.0	12
40	A comprehensive LC/MS analysis of novel cyclopentenedione library. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2016, 128, 342-351.	2.8	2
41	Dimeric cyanobacterial cyclopent-4-ene-1,3-dione as selective inhibitor of Gram-positive bacteria growth: Bio-production approach and preparative isolation by HPLC. <i>Algal Research</i> , 2016, 18, 244-249.	4.6	8
42	Flavonolignan 2,3-dehydroderivatives: Preparation, antiradical and cytoprotective activity. <i>Free Radical Biology and Medicine</i> , 2016, 90, 114-125.	2.9	72
43	Electrochemical Platform for the Detection of Transmembrane Proteins Reconstituted into Liposomes. <i>Analytical Chemistry</i> , 2016, 88, 4548-4556.	6.5	18
44	Cytotoxicity evaluation of large cyanobacterial strain set using selected human and murine in vitro cell models. <i>Ecotoxicology and Environmental Safety</i> , 2016, 124, 177-185.	6.0	18
45	Are High Proanthocyanidins Key to Cranberry Efficacy in the Prevention of Recurrent Urinary Tract Infection?. <i>Phytotherapy Research</i> , 2015, 29, 1559-1567.	5.8	99
46	Electrocatalytic Assay for Monitoring Methylglyoxal-Mediated Protein Glycation. <i>Analytical Chemistry</i> , 2015, 87, 1757-1763.	6.5	21
47	Sulfation modulates the cell uptake, antiradical activity and biological effects of flavonoids in vitro: An examination of quercetin, isoquercitrin and taxifolin. <i>Bioorganic and Medicinal Chemistry</i> , 2015, 23, 5402-5409.	3.0	35
48	Synthesis and Characterization of a Helicene-Based Imidazolium Salt and Its Application in Organic Molecular Electronics. <i>Chemistry - A European Journal</i> , 2015, 21, 2343-2347.	3.3	58
49	Metabolism of palmatine by human hepatocytes and recombinant cytochromes P450. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2015, 102, 193-198.	2.8	20
50	eL-Chem Viewer: A Freeware Package for the Analysis of Electroanalytical Data and Their Post-Acquisition Processing. <i>Sensors</i> , 2014, 14, 13943-13954.	3.8	31
51	Electrochemical Behaviour of Alkaloids: Detection and Interaction with DNA and Proteins. <i>Heterocycles</i> , 2014, 88, 879.	0.7	5
52	Chemo-Enzymatic Synthesis of Silybin and 2,3-Dehydrosilybin Dimers. <i>Molecules</i> , 2014, 19, 4115-4134.	3.8	21
53	The permselective layer prepared onto carbon and gold surfaces by electropolymerization of phenolic cyclopentenedione-nostotrebine 6. <i>Electrochemistry Communications</i> , 2014, 38, 53-56.	4.7	8
54	Electrochemical oxidation of proteins using ionic liquids as solubilizers, adsorption solvents and electrolytes. <i>Electrochimica Acta</i> , 2014, 126, 31-36.	5.2	10

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55	Investigation of protein FTT1103 electroactivity using carbon and mercury electrodes. Surface-inhibition approach for disulfide oxidoreductases using silver amalgam powder. <i>Analytica Chimica Acta</i> , 2014, 830, 23-31.	5.4	11
56	Novel bronchodilatory quinazolines and quinoxalines: Synthesis and biological evaluation. <i>European Journal of Medicinal Chemistry</i> , 2014, 74, 65-72.	5.5	14
57	Chemical Properties and Biological Activities of Cyclopentenediones: A Review. <i>Mini-Reviews in Medicinal Chemistry</i> , 2014, 14, 322-331.	2.4	13
58	Na ⁺ /K ⁺ -ATPase inhibition by cisplatin and consequences for cisplatin nephrotoxicity. <i>Biomedical Papers of the Medical Faculty of the University Palacky&#x0301;</i> , Olomouc, Czechoslovakia, 2014, 158, 194-200.	0.6	23
59	LC-MS metabolic study on quercetin and taxifolin galloyl esters using human hepatocytes as toxicity and biotransformation in vitro cell model. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2013, 86, 135-142.	2.8	26
60	Antioxidant, metal-binding and DNA-damaging properties of flavonolignans: A joint experimental and computational highlight based on 7-O-galloylsilybin. <i>Chemico-Biological Interactions</i> , 2013, 205, 173-180.	4.0	23
61	Mass spectrometric investigation of chelerythrine and dihydrochelerythrine biotransformation patterns in human hepatocytes. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2013, 941, 17-24.	2.3	13
62	Changes in the intrinsic electrocatalytic nature of Na ⁺ /K ⁺ ATPase reflect structural changes on ATP-binding: Electrochemical label-free approach. <i>Electrochemistry Communications</i> , 2013, 27, 104-107.	4.7	21
63	A Novel Semisynthetic Flavonoid 7-O-Galloyltaxifolin Upregulates Heme Oxygenase-1 in RAW264.7 Cells via MAPK/Nrf2 Pathway. <i>Journal of Medicinal Chemistry</i> , 2013, 56, 856-866.	6.4	45
64	Biosafety and antioxidant effects of a beverage containing silymarin and arginine. A pilot, human intervention cross-over trial. <i>Food and Chemical Toxicology</i> , 2013, 56, 178-183.	3.6	22
65	Effect of 3-O-Galloyl Substitution on the Electrochemical Oxidation of Quercetin and Silybin Galloyl Esters at Glassy Carbon Electrode. <i>Electroanalysis</i> , 2013, 25, 1621-1627.	2.9	11
66	Metabolic Profiling of Phenolic Acids and Oxidative Stress Markers after Consumption of <i>Lonicera caerulea</i> L. Fruit. <i>Journal of Agricultural and Food Chemistry</i> , 2013, 61, 4526-4532.	5.2	32
67	Electrochemical Pretreatment of Carbon Fiber Microelectrodes Based on Sinusoidal-wave Potential Cycling and its Application to Amperometric Sensing of Bioactive Compounds. <i>Current Analytical Chemistry</i> , 2013, 9, 305-311.	1.2	6
68	Electrochemical Pretreatment of Carbon Fiber Microelectrodes Based on Sinusoidal-wave Potential Cycling and its Application to Amperometric Sensing of Bioactive Compounds. <i>Current Analytical Chemistry</i> , 2013, 9, 305-311.	1.2	6
69	Biotransformation of flavonols and taxifolin in hepatocyte in vitro systems as determined by liquid chromatography with various stationary phases and electrospray ionization-quadrupole time-of-flight mass spectrometry. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2012, 899, 109-115.	2.3	27
70	Electrochemical Sensing of Total Antioxidant Capacity and Polyphenol Content in Wine Samples Using Amperometry Online-Coupled with Microdialysis. <i>Journal of Agricultural and Food Chemistry</i> , 2012, 60, 7836-7843.	5.2	15
71	Electrochemical oxidation of berberine and mass spectrometric identification of its oxidation products. <i>Bioelectrochemistry</i> , 2012, 87, 15-20.	4.6	20
72	Quercetin, Quercetin Glycosides and Taxifolin Differ in their Ability to Induce AhR Activation and CYP1A1 Expression in HepG2 Cells. <i>Phytotherapy Research</i> , 2012, 26, 1746-1752.	5.8	53

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73	Electrochemical Determination of Transmembrane Protein Na ⁺ /K ⁺ -ATPase and Its Cytoplasmic Loop C45. <i>Electroanalysis</i> , 2012, 24, 1758-1765.	2.9	7
74	Covalent binding of cisplatin impairs the function of Na ⁺ /K ⁺ -ATPase by binding to its cytoplasmic part. <i>Biochemical Pharmacology</i> , 2012, 83, 1507-1513.	4.4	37
75	Cytotoxicity and Pro-Apoptotic Activity of 2,2'-Bis[4,5-bis(4-hydroxybenzyl)-2-(4-hydroxyphenyl)cyclopent-4-en-1,3-dione], a Phenolic Cyclopentenedione Isolated from the Cyanobacterium Strain <i>Nostoc</i> sp. str. <i>Lukeřovř</i> 27/97. <i>Molecules</i> . 2011, 16, 4254-4263.	3.8	7
76	Electrochemical investigation of flavonolignans and study of their interactions with DNA in the presence of Cu(II). <i>Bioelectrochemistry</i> , 2011, 82, 117-124.	4.6	45
77	Identification of benzo[c]phenanthridine metabolites in human hepatocytes by liquid chromatography with electrospray ion-trap and quadrupole time-of-flight mass spectrometry. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2011, 879, 1077-1085.	2.3	38
78	Oxidation of Sanguinarine and Its Dihydro- α -Derivative at a Pyrolytic Graphite Electrode Using Ex Situ Voltammetry. Study of the Interactions of the Alkaloids with DNA. <i>Electroanalysis</i> , 2011, 23, 1671-1680.	2.9	11
79	Phytochemical and antimicrobial characterization of <i>Macleaya cordata</i> herb. <i>Fř-toterapř</i> , 2010, 81, 1006-1012.	2.2	132
80	Oxidation of Protopine at a Pyrolytic Graphite Electrode Using Cyclic and Square-Wave Voltammetry. <i>Electroanalysis</i> , 2010, 22, 2879-2883.	2.9	5
81	Ion-trap mass spectrometry for determination of 3,5,3'-triiodo-L-thyronine and 3,5,3',5'-tetraiodo-L-thyronine in neonatal rat cardiomyocytes. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2010, 53, 688-692.	2.8	3
82	The Chemical and Biological Properties of Protopine and Allocryptopine. <i>Heterocycles</i> , 2010, 81, 1773.	0.7	38
83	Analytical methods and strategies in the study of plant polyphenolics in clinical samples. <i>Analytical Methods</i> , 2010, 2, 604.	2.7	29
84	Ex situ Voltammetry and Chronopotentiometry of Doxorubicin at a Pyrolytic Graphite Electrode: Redox and Catalytic Properties and Analytical Applications. <i>Electroanalysis</i> , 2009, 21, 2139-2144.	2.9	43
85	The reduction of doxorubicin at a mercury electrode and monitoring its interaction with DNA using constant current chronopotentiometry. <i>Collection of Czechoslovak Chemical Communications</i> , 2009, 74, 1727-1738.	1.0	14
86	Current trends in isolation, separation, determination and identification of isoflavones: A review. <i>Journal of Separation Science</i> , 2008, 31, 2054-2067.	2.5	108
87	Label-Free Electrochemical Monitoring of DNA Ligase Activity. <i>Analytical Chemistry</i> , 2008, 80, 7609-7613.	6.5	17
88	Electrochemical Sensing of Chromium-Induced DNA Damage: DNA Strand Breakage by Intermediates of Chromium(VI) Electrochemical Reduction. <i>Electroanalysis</i> , 2007, 19, 2093-2102.	2.9	23
89	A hydrophilic interaction chromatography coupled to a mass spectrometry for the determination of glutathione in plant somatic embryos. <i>Analyst</i> , The, 2006, 131, 1167-1174.	3.5	83
90	Evaluation of Isoflavone Aglycon and Glycoside Distribution in Soy Plants and Soybeans by Fast Column High-Performance Liquid Chromatography Coupled with a Diode-Array Detector. <i>Journal of Agricultural and Food Chemistry</i> , 2005, 53, 5848-5852.	5.2	73

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91	Electrochemical determination of lead and glutathione in a plant cell culture. <i>Bioelectrochemistry</i> , 2004, 63, 347-351.	4.6	62
92	Square wave and elimination voltammetric analysis of azidothymidine in the presence of oligonucleotides and chromosomal DNA. <i>Bioelectrochemistry</i> , 2004, 63, 31-36.	4.6	35
93	Esterases as a marker for growth of BY-2 tobacco cells and early somatic embryos of the Norway spruce. <i>Plant Cell, Tissue and Organ Culture</i> , 2004, 79, 195-201.	2.3	22
94	Determination of Azidothymidine – an Antiproliferative and Virostatic Drug by Square-Wave Voltammetry. <i>Electroanalysis</i> , 2004, 16, 224-230.	2.9	29
95	Cyclic voltammetric study of the redox system of glutathione using the disulfide bond reductant tris(2-carboxyethyl)phosphine. <i>Bioelectrochemistry</i> , 2004, 63, 19-24.	4.6	90
96	Application of Avidin-Biotin Technology and Adsorptive Transfer Stripping Square-Wave Voltammetry for Detection of DNA Hybridization and Avidin in Transgenic Avidin Maize. <i>Analytical Chemistry</i> , 2003, 75, 2663-2669.	6.5	109
97	Catalytic signal of rabbit liver metallothionein on a mercury electrode: a combination of derivative chronopotentiometry with adsorptive transfer stripping. <i>Bioelectrochemistry</i> , 2002, 56, 57-61.	4.6	64