Romas Baronas

List of Publications by Year
in descending order

73 papers	734 citations	566801 15 h-index	610482 24 g-index
78 all docs	78 docs citations	78 times ranked	323 citing authors

#	Article	IF	Citations
1	The Influence of the Enzyme Membrane Thickness on the Response of Amperometric Biosensors. Sensors, 2003, 3, 248-262.	2.1	74
2	Mathematical Modeling of Biosensors. Springer Series on Chemical Sensors and Biosensors, 2010, , .	0.5	53
3	Modelling amperometric enzyme electrode with substrate cyclic conversion. Biosensors and Bioelectronics, 2004, 19, 915-922.	5.3	43
4	Modelling of Amperometric Biosensors with Rough Surface of the Enzyme Membrane. Journal of Mathematical Chemistry, 2003, 34, 227-242.	0.7	39
5	Further Comparisons of Finite Difference Schemes for Computational Modelling of Biosensors. Nonlinear Analysis: Modelling and Control, 2009, 14, 419-433.	1.1	33
6	Modelling of Amperometric Biosensors in the Case of Substrate Inhibition. Sensors, 2006, 6, 1513-1522.	2.1	29
7	Modelling Dynamics of Amperometric Biosensors in Batch and Flow Injection Analysis. Journal of Mathematical Chemistry, 2002, 32, 225-237.	0.7	28
8	Computational Modelling of Biosensors with Perforated and Selective Membranes. Journal of Mathematical Chemistry, 2006, 39, 345-362.	0.7	28
9	The Effect of Diffusion Limitations on the Response of Amperometric Biosensors with Substrate Cyclic Conversion. Journal of Mathematical Chemistry, 2004, 35, 199-213.	0.7	24
10	Modelling Amperometric Biosensors Based on Chemically Modified Electrodes. Sensors, 2008, 8, 4800-4820.	2.1	24
11	Mathematical Modeling of Plateâˆ'gap Biosensors with an Outer Porous Membrane. Sensors, 2006, 6, 727-745.	2.1	20
12	Nonlinear effects of diffusion limitations on the response and sensitivity of amperometric biosensors. Electrochimica Acta, 2017, 240, 399-407.	2.6	20
13	Modelling a biosensor based on the heterogeneous microreactor. Journal of Mathematical Chemistry, 1999, 25, 245-252.	0.7	18
14	An Analysis of Mixtures Using Amperometric Biosensors and Artificial Neural Networks. Journal of Mathematical Chemistry, 2004, 36, 281-297.	0.7	16
15	Mathematical Modeling of Biosensors Based on an Array of Enzyme Microreactors. Sensors, 2006, 6, 453-465.	2.1	16
16	Optimal design of amperometric biosensors applying multi-objective optimization and decision visualization. Electrochimica Acta, 2016, 211, 586-594.	2.6	16
17	Mathematical Model of the Biosensors Acting in a Trigger Mode. Sensors, 2004, 4, 20-36.	2.1	15
18	Modelling the biosensor utilising parallel substrates conversion. Journal of Electroanalytical Chemistry, 2012, 685, 63-71.	1.9	14

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19	Effect of Diffusion Limitations on Multianalyte Determination from Biased Biosensor Response. Sensors, 2014, 14, 4634-4656.	2.1	14
20	Numerical modelling of the normal adhesive elasticâ€“plastic interaction of a bacterium. Advanced Powder Technology, 2015, 26, 742-752.	2.0	14
21	Modelling carbon nanotube based biosensor. Journal of Mathematical Chemistry, 2011, 49, 995-1010.	0.7	13
22	Modelling glucose dehydrogenase-based amperometric biosensor utilizing synergistic substrates conversion. Electrochimica Acta, 2014, 146, 752-758.	2.6	12
23	Modelling the enzyme catalysed substrate conversion in a microbioreactor acting in continuous flow mode. Nonlinear Analysis: Modelling and Control, 2018, 23, 437-458.	1.1	12
24	Optimization of the multianalyte determination with biased biosensor response. Chemometrics and Intelligent Laboratory Systems, 2013, 126, 108-116.	1.8	11
25	Modelling Carbon Nanotubes-Based Mediatorless Biosensor. Sensors, 2012, 12, 9146-9160.	2.1	10
26	Numerical simulation of a plate-gap biosensor with an outer porous membrane. Simulation Modelling Practice and Theory, 2008, 16, 962-970.	2.2	9
27	Mechanisms controlling the sensitivity of amperometric biosensors in flow injection analysis systems. Journal of Mathematical Chemistry, 2011, 49, 1521-1534.	0.7	9
28	A multi-cellular network of metabolically active E. coli as a weak gel of living Janus particles. Soft Matter, 2013, 9, 4489.	1.2	9
29	Computational modelling of amperometric biosensors in the case of substrate and product inhibition. Journal of Mathematical Chemistry, 2010, 47, 430-445.	0.7	8
30	Metabolic selfâ€organization of bioluminescent <i>Escherichia coli</i>. Luminescence, 2011, 26, 716-721.	1.5	8
31	Computational modelling of three-layered biosensor based on chemically modified electrode. Computational and Applied Mathematics, 2016, 35, 405-421.	1.3	8
32	Modeling the bacterial self-organization in a circular container along the contact line as detected by bioluminescence imaging. Nonlinear Analysis: Modelling and Control, 2011, 16, 270-282.	1.1	8
33	Modelling a Peroxidase-based Optical Biosensor. Sensors, 2007, 7, 2723-2740.	2.1	7
34	Modelling of Amperometric Biosensor Used for Synergistic Substrates Determination. Sensors, 2012, 12, 4897-4917.	2.1	7
35	Computational modeling of batch stirred tank reactor based on spherical catalyst particles. Journal of Mathematical Chemistry, 2019, 57, 327-342.	0.7	7
36	Computational Modeling of Bienzyme Biosensor with Different Initial and Boundary Conditions. Informatica, 2013, 24, 505-521.	1.5	7

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37	Reducing spatial dimensionality in a model of moisture diffusion in a solid material. International Journal of Heat and Mass Transfer, 2004, 47, 699-705.	2.5	5
38	Modelling synergistic action of laccase-based biosensor utilizing simultaneous substrates conversion. Journal of Mathematical Chemistry, 2011, 49, 1573-1586.	0.7	5
39	Numerical Modeling of Bacterium-surface Interaction by Applying DEM. Procedia Engineering, 2015, 102, 1408-1414.	1.2	5
40	Electrochemical Peroxidaseâ€Catalase Clarkâ€Type Biosensor: Computed and Experimental Response. Electroanalysis, 2013, 25, 1491-1496.	1.5	4
41	Computational Modeling of Mediator Oxidation by Oxygen in an Amperometric Glucose Biosensor. Sensors, 2014, 14, 2578-2594.	2.1	4
42	Microtiter plate tests for segregation of bioluminescent bacteria. Luminescence, 2016, 31, 127-134.	1.5	4
43	Phoretic interactions and oscillations in active suspensions of growing Escherichia coli. Royal Society Open Science, 2018, 5, 180008.	1.1	4
44	Computational modeling of the bacterial self-organization in a rounded container: the effect of dimensionality. Nonlinear Analysis: Modelling and Control, 2015, 20, 603-620.	1.1	3
45	Computational Modelling of Amperometric Enzyme Electrodes with Selective and Perforated Membranes. AIP Conference Proceedings, 2007, , .	0.3	2
46	Modeling carbohydrates oxidation by oxygen catalyzed by bienzyme glucose dehydrogenase/laccase system immobilized into microreactor with carbon nanotubes. Journal of Mathematical Chemistry, 2021, 59, 168-185.	0.7	2
47	Application Of Two Phase Multi-Objective Optimization To Design Of Biosensors Utilizing Cyclic Substrate Conversion. , 2017, , .		2
48	Modelling of the normal elastic dissipative interaction of a S. Aureus Bacterium. AIP Conference Proceedings, 2015, , .	0.3	1
49	COMPUTATIONAL MODELING OF SELF-ORGANIZATION OF BACTERIAL POPULATION CONSISTING OF SUBPOPULATIONS OF ACTIVE AND PASSIVE CELLS. Journal of Biological Systems, 2019, 27, 365-381.	0.5	1
50	One-Layer Multi-Enzyme Models of Biosensors. Springer Series on Chemical Sensors and Biosensors, 2010, , 113-137.	0.5	1
51	Biosensor Action. Springer Series on Chemical Sensors and Biosensors, 2010, , 3-8.	0.5	1
52	Modeling and Simulation of Biosensors. , 2014, , 1304-1309.		1
53	Numerical Analysis of the Dynamics of Reactant Conversion in Batch Stirred Tank Reactor. , 2018, , .		0
54	Asynchronous Client-Side Coordination of Cluster Service Sessions. Communications in Computer and Information Science, 2018, , 121-133.	0.4	0

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55	Numerical Investigation of the Geometrical Factor for Simulating the Drying of Wood. , 2004, , 95-100.		0
56	The Difference Schemes for the Diffusion Equation. Springer Series on Chemical Sensors and Biosensors, 2010, , 249-291.	0.5	0
57	Modeling Biosensors at Steady State and Internal Diffusion Limitations. Springer Series on Chemical Sensors and Biosensors, 2010, , 9-20.	0.5	0
58	Mono-Layer Mono-Enzyme Models of Biosensors. Springer Series on Chemical Sensors and Biosensors, 2010, , 43-111.	0.5	0
59	Modeling Biosensors Utilizing Microbial Cells. Springer Series on Chemical Sensors and Biosensors, 2010, , 27-31.	0.5	0
60	Multi-Layer Models of Biosensors. Springer Series on Chemical Sensors and Biosensors, 2010, , 139-202.	0.5	0
61	Modeling Biosensors of Complex Geometry. Springer Series on Chemical Sensors and Biosensors, 2010, , 203-246.	0.5	0
62	One-Dimensional Modelling Of A Carbon Nanotube-Based Biosensor. , 2012, , .		0
63	Biosensors Acting in Injection Mode. Springer Series on Chemical Sensors and Biosensors, 2021, , 183-205.	0.5	0
64	Biosensors Based on Microreactors. Springer Series on Chemical Sensors and Biosensors, 2021, , 303-344.	0.5	0
65	Biosensors Utilizing Consecutive and Parallel Substrates Conversion. Springer Series on Chemical Sensors and Biosensors, 2021, , 85-120.	0.5	0
66	Biosensors Utilizing Synergistic Substrates Conversion. Springer Series on Chemical Sensors and Biosensors, 2021, , 155-181.	0.5	0
67	Modeling Carbon Nanotube Based Biosensors. Springer Series on Chemical Sensors and Biosensors, 2021, , 345-376.	0.5	0
68	Chemically Modified Enzyme and Biomimetic Catalysts Electrodes. Springer Series on Chemical Sensors and Biosensors, 2021, , 207-242.	0.5	0
69	Biosensors Response Amplification with Cyclic Substrates Conversion. Springer Series on Chemical Sensors and Biosensors, 2021, , 121-154.	0.5	0
70	Modeling Biosensors Utilizing Microbial Cells. Springer Series on Chemical Sensors and Biosensors, 2021, , 377-403.	0.5	0
71	Introduction to Modeling of Biosensors. Springer Series on Chemical Sensors and Biosensors, 2021, , 1-47.	0.5	0
72	Application of Mathematical Modeling to Optimal Design of Biosensors. Springer Series on Chemical Sensors and Biosensors, 2021, , 405-445.	0.5	0

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73	Biosensors Utilizing Non-Michaelisâ€“Menten Kinetics. Springer Series on Chemical Sensors and Biosensors, 2021, , 275-301.	0.5	0