Peter Gemeiner

List of Publications by Year
in descending order

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117 papers	3,787 citations	147801 31 h-index	144013 57 g-index
123 all docs	123 docs citations	123 times ranked	4405 citing authors

#	Article	IF	Citations
1	Hyaluronic acid: a natural biopolymer with a broad range of biomedical and industrial applications. Biotechnology Letters, 2006, 29, 17-25.	2.2	795
2	Multiscale requirements for bioencapsulation in medicine and biotechnology. Biomaterials, 2009, 30, 2559-2570.	11.4	198
3	Lectinomics. Biotechnology Advances, 2009, 27, 1-15.	11.7	123
4	Comparison of different technologies for alginate beads production. Chemical Papers, 2008, 62, .	2.2	113
5	Glycan and lectin microarrays for glycomics and medicinal applications. Medicinal Research Reviews, 2010, 30, 394-418.	10.5	94
6	Baeyer-Villiger oxidations: biotechnological approach. Applied Microbiology and Biotechnology, 2016, 100, 6585-6599.	3.6	93
7	Improved selectivity of microbial biosensor using membrane coating. Application to the analysis of ethanol during fermentation. Biosensors and Bioelectronics, 2003, 18, 1125-1134.	10.1	84
8	Membrane-bound dehydrogenases from Gluconobacter sp.: Interfacial electrochemistry and direct bioelectrocatalysis. Bioelectrochemistry, 2009, 76, 53-62.	4.6	80
9	Electrochemical lectin based biosensors as a label-free tool in glycomics. Mikrochimica Acta, 2013, 180, 1-13.	5.0	65
10	Immobilization of a whole-cell epoxide-hydrolyzing biocatalyst in sodium alginateâˆ’cellulose sulfateâˆ’poly(methylene-co-guanidine) capsules using a controlled encapsulation process. Enzyme and Microbial Technology, 2005, 36, 118-126.	3.2	63
11	Fructose biosensor based on d-fructose dehydrogenase immobilised on a ferrocene-embedded cellulose acetate membrane. Analytica Chimica Acta, 2001, 439, 39-46.	5.4	61
12	Progress in biocatalysis with immobilized viable whole cells: systems development, reaction engineering and applications. Biotechnology Letters, 2017, 39, 667-683.	2.2	60
13	Monitoring of dihydroxyacetone production during oxidation of glycerol by immobilized Gluconobacter oxydans cells with an enzyme biosensor. Enzyme and Microbial Technology, 2001, 28, 383-388.	3.2	55
14	A hyaluronic acid dispersed carbon nanotube electrode used for a mediatorless NADH sensing and biosensing. Talanta, 2011, 84, 355-361.	5.5	53
15	A novel microbial biosensor based on cells of Gluconobacter oxydans for the selective determination of 1,3-propanediol in the presence of glycerol and its application to bioprocess monitoring. Analytical and Bioanalytical Chemistry, 2007, 388, 287-295.	3.7	51
16	Determination of total sugars in lignocellulose hydrolysate by a mediated Gluconobacter oxydans biosensor. Analytica Chimica Acta, 2000, 420, 1-7.	5.4	50
17	Novel glucose non-interference biosensor for lactose detection based on galactose oxidaseâ€“peroxidase with and without co-immobilised Î²-galactosidase. Analyst, The, 2000, 125, 1285-1289.	3.5	49
18	Lectinomics I. Relevance of exogenous plant lectins in biomedical diagnostics. Biologia (Poland), 2009, 64, 1-19.	1.5	49

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19	Biochemical engineering of biocatalysts immobilized on cellulosic materials. Enzyme and Microbial Technology, 1993, 15, 551-566.	3.2	48
20	Monitoring of ethanol during fermentation using a microbial biosensor with enhanced selectivity. Bioelectrochemistry, 2002, 56, 127-129.	4.6	47
21	Improvement of the stability of glucose oxidase via encapsulation in sodium alginateâ€“cellulose sulfateâ€“poly(methylene-co-guanidine) capsules. Enzyme and Microbial Technology, 2007, 41, 748-755.	3.2	47
22	Degradation of high-molecular-weight hyaluronan by hydrogen peroxide in the presence of cupric ions. Carbohydrate Research, 2006, 341, 639-644.	2.3	46
23	Immobilization in biotechnology and biorecognition: from macro- to nanoscale systems. Chemical Papers, 2012, 66, .	2.2	43
24	Ultrasensitive impedimetric lectin based biosensor for glycoproteins containing sialic acid. Mikrochimica Acta, 2013, 180, 151-159.	5.0	43
25	Batch and continuous mead production with pectate immobilised, ethanol-tolerant yeast. Biotechnology Letters, 2001, 23, 977-982.	2.2	42
26	Application of the enzyme thermistor to the direct estimation of intrinsic kinetics using the saccharose-immobilized invertase system. Enzyme and Microbial Technology, 1990, 12, 830-835.	3.2	40
27	Gluconobacter in biosensors: applications of whole cells and enzymes isolated from gluconobacter and acetobacter to biosensor construction. Biotechnology Letters, 2006, 28, 2003-2010.	2.2	39
28	Electrochemistry of bilirubin oxidase and its use in preparation of a low cost enzymatic biofuel cell based on a renewable composite binder chitosan. Electrochimica Acta, 2013, 87, 366-374.	5.2	37
29	Stability enhancement of Escherichia coli penicillin G acylase by glycosylation with yeast mannan. Biotechnology and Applied Biochemistry, 2001, 34, 127.	3.1	36
30	Hyaluronan degradation by copper(II) chloride and ascorbate: rotational viscometric, EPR spin-trapping, and MALDIâ€“TOF mass spectrometric investigations. Carbohydrate Research, 2006, 341, 2826-2834.	2.3	33
31	Reactors for continuous primary beer fermentation using immobilised yeast. Biotechnology Letters, 1997, 11, 261-264.	0.5	32
32	Ethanol Gluconobacter biosensor designed for flow injection analysis. Sensors and Actuators B: Chemical, 2009, 138, 581-586.	7.8	32
33	Title is missing!. Biotechnology Letters, 1998, 20, 841-845.	2.2	31
34	Biospecific immobilization of mannanâ€“penicillin G acylase neoglycoenzyme on Concanavalin A-bead cellulose. Journal of Biotechnology, 2004, 110, 11-19.	3.8	31
35	Contribution of Oxidative-Reductive Reactions to High-Molecular-Weight Hyaluronan Catabolism. Chemistry and Biodiversity, 2005, 2, 1242-1245.	2.1	31
36	Stability of penicillin G acylase modified with various polysaccharides. Enzyme and Microbial Technology, 2006, 39, 579-585.	3.2	31

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37	Production of plumbagin by cell suspension cultures of Drosophyllum lusitanicum Link.. Journal of Biotechnology, 1996, 49, 153-161.	3.8	28
38	Solution properties of high-molar-mass hyaluronans: the biopolymer degradation by ascorbate. Carbohydrate Research, 2007, 342, 1071-1077.	2.3	28
39	Continuous testing system for Baeyerâ€“Villiger biooxidation using recombinant Escherichia coli expressing cyclohexanone monooxygenase encapsulated in polyelectrolyte complex capsules. Enzyme and Microbial Technology, 2011, 49, 284-288.	3.2	28
40	Stabilization of ferrocene leakage by physical retention in a cellulose acetate membrane. The fructose biosensor. Bioelectrochemistry, 2002, 55, 149-151.	4.6	27
41	Production of cytidine 5â€²-monophospho-N-acetyl-Î²-D-neuraminic acid (CMP-sialic acid) using enzymes or whole cells entrapped in calcium pectate-silica-gel beads. Biotechnology and Applied Biochemistry, 2004, 40, 101.	3.1	27
42	Screening of concanavalin A-bead cellulose conjugates using an enzyme thermistor with immobilized invertase as the reporter catalyst. Biotechnology and Bioengineering, 1994, 43, 286-292.	3.3	26
43	PROPERTIES OF HYDROGEL MATERIALS USED FOR ENTRAPMENT OF MICROBIAL CELLS IN PRODUCTION OF FERMENTED BEVERAGES. Artificial Cells, Blood Substitutes, and Biotechnology, 2002, 30, 199-218.	0.9	26
44	Physical and Bioengineering Properties of Polyvinyl Alcohol Lens-Shaped Particles Versus Spherical Polyelectrolyte Complex Microcapsules as Immobilisation Matrices for a Whole-Cell Baeyerâ€“Villiger Monooxygenase. Applied Biochemistry and Biotechnology, 2014, 174, 1834-1849.	2.9	26
45	Influence of immobilization on the thermal inactivation of yeast invertase. Enzyme and Microbial Technology, 1997, 21, 196-202.	3.2	25
46	Encapsulation of recombinant E. coli expressing cyclopentanone monooxygenase in polyelectrolyte complex capsules for Baeyerâ€“Villiger biooxidation of 8-oxabicyclo[3.2.1]oct-6-en-3-one. Biotechnology Letters, 2010, 32, 675-680.	2.2	25
47	Affinity chromatography of rat liver lactate dehydrogenase on the Remazol derivative of bead cellulose. Journal of Chromatography A, 1980, 194, 95-99.	3.7	24
48	Production of non-alcoholic beer using free and immobilized cells of Saccharomyces cerevisiae deficient in the tricarboxylic acid cycle. Biotechnology and Applied Biochemistry, 2002, 35, 133.	3.1	24
49	Whole-cell Gluconobacter oxydans biosensor for 2-phenylethanol biooxidation monitoring. Analytica Chimica Acta, 2015, 854, 140-144.	5.4	22
50	Stepwise immobilization of proteins via their glycosylation. Journal of Proteomics, 1981, 4, 309-319.	2.4	20
51	Polyelectrolyte complex capsules as a material for enzyme immobilization. Applied Biochemistry and Biotechnology, 1991, 30, 313-324.	2.9	20
52	Continuous secondary fermentation using immobilised yeast. Biotechnology Letters, 1998, 20, 1041-1045.	2.2	20
53	Analysis of ethanol in fermentation samples by a robust nanocomposite-based microbial biosensor. Biotechnology Letters, 2012, 34, 1033-1039.	2.2	20
54	High-Molar-Mass Hyaluronan Behavior During Testing Its Radical Scavenging Capacity in Organic and Aqueous Media: Effects of the Presence of Manganese(II) Ions. Chemistry and Biodiversity, 2009, 6, 162-169.	2.1	19

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55	Simulation-based optimisation of thermodynamic conditions in the ESEM for dynamical in-situ study of spherical polyelectrolyte complex particles in their native state. Ultramicroscopy, 2020, 211, 112954.	1.9	19
56	Indirect evidence of direct electron communication between the active site of galactose oxidase and a graphite electrode. Bioelectrochemistry, 2002, 56, 23-25.	4.6	18
57	High performance microbial 3-D bionanocomposite as a bioanode for a mediated biosensor device. Electrochemistry Communications, 2011, 13, 966-968.	4.7	18
58	Lectinâ€based protein microarray analysis of differences in serum alphaâ€2â€macroglobulin glycosylation between patients with colorectal cancer and persons without cancer. Biotechnology and Applied Biochemistry, 2016, 63, 457-464.	3.1	18
59	Size-exclusion effect of a substrate upon kinetics of trypsin immobilized on porous bead cellulose. 1. Influence of distribution coefficient of a substrate. Enzyme and Microbial Technology, 1986, 8, 109-114.	3.2	16
60	Study of porous cellulose beads as an enzyme carrier via simple mathematical models for the hydrolysis of saccharose using immobilized invertase reactors. Enzyme and Microbial Technology, 1988, 10, 306-311.	3.2	16
61	Off-line FIA monitoring of d-sorbitol consumption during l-sorbose production using a sorbitol biosensor. Analytica Chimica Acta, 2009, 644, 68-71.	5.4	15
62	Antraquinone-triazine derivatives of polysaccharides. Relation between structure and affinity to lactate dehydrogenase. Collection of Czechoslovak Chemical Communications, 1981, 46, 419-427.	1.0	15
63	Degradation of High-Molar-Mass Hyaluronan by AscorbateplusCupric Ions: Effects of D-Penicillamine Addition. Chemistry and Biodiversity, 2009, 6, 389-395.	2.1	14
64	Binding of d-mannose-containing glycoproteins to d-mannose-specific lectins studied by surface plasmon resonance. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 382, 198-202.	4.7	14
65	Study of porous cellulose beads as an affinity adsorbent via quantitative measurements of interactions of lactate dehydrogenase with immobilized anthraquinone dyes. Enzyme and Microbial Technology, 1988, 10, 568-573.	3.2	13
66	Viability of free and encapsulated Escherichia coli overexpressing cyclopentanone monooxygenase monitored during model Baeyerâ€“Villiger biooxidation by confocal laser scanning microscopy. Biotechnology Letters, 2012, 34, 309-314.	2.2	13
67	A biopolymer-based carbon nanotube interface integrated with a redox shuttle and a D-sorbitol dehydrogenase for robust monitoring of D-sorbitol. Mikrochimica Acta, 2011, 175, 21-30.	5.0	12
68	A lectin-based cell microarray approach to analyze the mammalian granulosa cell surface glycosylation profile. Glycoconjugate Journal, 2016, 33, 717-724.	2.7	12
69	Thiol and disulphide derivatives of cellulose. Collection of Czechoslovak Chemical Communications, 1983, 48, 267-278.	1.0	11
70	New approaches for verification of kinetic parameters of immobilized concanavalin A: Invertase preparations investigated by flow microcalorimetry. Biotechnology and Bioengineering, 2000, 49, 26-35.	3.3	11
71	Investigation of immobilized glucoamylase kinetics by flow calorimetry. Thermochimica Acta, 2001, 378, 79-85.	2.7	11
72	Nocardia tartaricans cells immobilized in sodium alginateâ€“cellulose sulfateâ€“poly (methylene-co-guanidine)capsules: mechanical resistance and operational stability. Journal of Chemical Technology and Biotechnology, 2006, 81, 500-504.	3.2	11

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73	Microbial monooxygenase amperometric biosensor for monitoring of Baeyerâ€“Villiger biotransformation. Biosensors and Bioelectronics, 2013, 50, 235-238.	10.1	11
74	Analysis of changes in the glycan composition of serum, cytosol and membrane glycoprotein biomarkers of colorectal cancer using a lectin-based protein microarray. Analytical Methods, 2017, 9, 2660-2666.	2.7	11
75	New approaches for verification of kinetic parameters of immobilized concanavalin A: Invertase preparations investigated by flow microcalorimetry. Biotechnology and Bioengineering, 1996, 49, 26-35.	3.3	11
76	Perspectives in Glycomics and Lectin Engineering. Methods in Molecular Biology, 2014, 1200, 421-445.	0.9	11
77	Biosensors with Immobilised Microbial Cells Using Amperometric and Thermal Detection Principles. , 2005, , 549-566.		10
78	Protective effects of manganese(II) chloride on hyaluronan degradation by oxidative system ascorbate plus cupric chloride. Interdisciplinary Toxicology, 2010, 3, 26-34.	1.0	10
79	Preparation of p-aminobenzyl cellulose and its utilization for immobilization of enzymes. Collection of Czechoslovak Chemical Communications, 1980, 45, 2847-2854.	1.0	9
80	Competitive elution of lactate dehydrogenase from Cibacron Blueâ€"bead cellulose with Cibacron Blueâ€"dextrans. Journal of Chromatography A, 1990, 510, 197-204.	3.7	9
81	Preparation and molecular characterization of carboxymethylglucan fractions. Carbohydrate Polymers, 1991, 15, 79-87.	10.2	9
82	Development of enzyme flow calorimeter system for monitoring of microbial glycerol conversion. Applied Microbiology and Biotechnology, 2006, 72, 1170-1175.	3.6	9
83	A filtration probe-free on-line monitoring of glycerol during fermentation by a biosensor device. Enzyme and Microbial Technology, 2008, 42, 434-439.	3.2	9
84	Polyelectrolyte Complex Beads by Novel Two-Step Process for Improved Performance of Viable Whole-Cell Baeyer-Villiger Monoxygenase by Immobilization. Catalysts, 2017, 7, 353.	3.5	9
85	The preparation of O-(formylmethyl)cellulose. Collection of Czechoslovak Chemical Communications, 1984, 49, 821-827.	1.0	9
86	Thiol derivatives of cellulose as supports for the immobilization of non-thiol enzymes. Collection of Czechoslovak Chemical Communications, 1981, 46, 1693-1700.	1.0	8
87	Title is missing!. Biotechnology Letters, 2002, 24, 925-930.	2.2	8
88	Flow Calorimetryâ€"A Useful Tool for Determination of Immobilizedcis-Epoxysuccinate Hydrolase Activity fromNocardia tartaricans. Artificial Cells, Blood Substitutes, and Biotechnology, 2004, 32, 77-89.	0.9	8
89	Coencapsulation of Oxygen Carriers and Glucose Oxidase in Polyelectrolyte Complex Capsules for the Enhancement of D-Gluconic Acid and Î´-Gluconolactone Production. Artificial Cells, Blood Substitutes, and Biotechnology, 2010, 38, 90-98.	0.9	8
90	Biooxidation of 2-phenylethanol to phenylacetic acid by whole-cellGluconobacter oxydansbiocatalyst immobilized in polyelectrolyte complex capsules. Biocatalysis and Biotransformation, 2015, 33, 111-120.	2.0	8

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91	Direct spectrophotometric determination of proteins immobilized on bead cellulose and dissolved in cadoxene. Applied Biochemistry and Biotechnology, 1983, 8, 381-393.	2.9	7
92	Size-exclusion effect of a substrate upon kinetics of trypsin immobilized on porous bead cellulose. 2. Influence of hydrodynamic diameter of substrate. Enzyme and Microbial Technology, 1987, 9, 44-46.	3.2	7
93	Natural and Synthetic Carriers Suitable for Immobilization of Viable Cells, Active Organelles, and Molecules. , 1994, , 1-128.		7
94	Two-Step covalent immobilization of enzymes as a way for study of effects influencing catalytic activity. Journal of Solid-Phase Biochemistry, 1980, 5, 197-209.	0.5	6
95	Novel mathematical model for description of non-cooperative chemisorption kinetics. Die Makromolekulare Chemie, 1985, 9, 229-232.	1.1	6
96	Partition mechanism of adsorption and the absence of displacement phenomena in the zonal analytical chromatography of proteins on bead 2-hydroxy-3-phenoxypropyl-cellulose. Collection of Czechoslovak Chemical Communications, 1989, 54, 2375-2385.	1.0	6
97	Mannanâ€“penicillin G acylase neoglycoproteins and their potential applications in biotechnology. Biotechnology and Applied Biochemistry, 2004, 39, 285-291.	3.1	6
98	Inhibition of lactate dehydrogenase ex rabbit muscle by Cibacron Blue 3G-A bound to water-soluble hydroxyethylcellulose. Collection of Czechoslovak Chemical Communications, 1985, 50, 1335-1340.	1.0	6
99	Effect of the concentration of 5,5'-dithiobis(2-nitrobenzoic acid) on parameters of the kinetics of its chemisorption on thiol derivatives of cellulose. Collection of Czechoslovak Chemical Communications, 1986, 51, 545-552.	1.0	6
100	The chemical/osmotic conditions for growth and plumbagin accumulation of Drosophyllum lusitanicum Link. suspension cultures. Biotechnology Letters, 1996, 18, 1453-1458.	2.2	5
101	In vitro screening of the action of non-steroidal anti-inflammatory drugs on hypochlorous acid-induced hyaluronan degradation. Polymer Degradation and Stability, 2007, 92, 644-652.	5.8	5
102	Investigation of Catalytic Properties of Immobilized Enzymes and Cells by Flow Microcalorimetry. Advances in Biochemical Engineering/Biotechnology, 1999, 64, 69-99.	1.1	5
103	Study of porous cellulose beads as a dye-ligand matrix. Effect of protein admixtures and concentration of immobilized dye in the quantitative analysis of lactate dehydrogenase: Cibacron blue interaction. Collection of Czechoslovak Chemical Communications, 1990, 55, 581-586.	1.0	4
104	Enzyme flow microcalorimetryâ€”a useful tool for screening of immobilized penicillin G acylase. Journal of Chemical Technology and Biotechnology, 1998, 73, 31-36.	3.2	3
105	Oligosaccharides, neoglycoproteins and humanized plastics: their biocatalytic synthesis and possible medical applications. Biotechnology and Applied Biochemistry, 2007, 46, 1.	3.1	3
106	Antrachinon-triazine derivatives of polysaccharides, affinity of bovine heart lactate dehydrogenase to Cibacron Blue derivatives of water-soluble dextran fractions and hydroxyethyl-starches. Collection of Czechoslovak Chemical Communications, 1984, 49, 549-554.	1.0	3
107	SPR biosensor chip based on mannan isolated from Candida dubliniensis yeasts applied in immunization effectiveness testing. Sensors and Actuators B: Chemical, 2022, 350, 130883.	7.8	3
108	Isothiocyanates as a new type of ligand for covalent chromatography of thiol proteins. Journal of Solid-Phase Biochemistry, 1977, 2, 289-294.	0.5	2

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109	Phenylhydrazonopropanedinitrile derivatives of cellulose: New type of sorbent for thiol compounds. Reactive Polymers, Ion Exchangers, Sorbents, 1983, 1, 91-100.	0.0	2
110	Progress in emerging techniques for characterization of immobilized viable whole-cell biocatalysts. Chemical Papers, 2017, 71, 2309-2324.	2.2	2
111	Immobilized Cell Physiology Imaging and Stabilization of Enzyme Cascade Reaction Using Recombinant Cells Escherichia coli Entrapped in Polyelectrolyte Complex Beads by Jet Break-Up Encapsulator. Catalysts, 2020, 10, 1288.	3.5	2
112	Lectin-Based Protein Microarray for the Glycan Analysis of Colorectal Cancer Biomarkers: The Insulin-Like Growth Factor System. Methods in Molecular Biology, 2022, 2460, 207-222.	0.9	2
113	Screening of Concanavalin A-Bead Cellulose Conjugates by an Enzyme Thermistor Using Immobilized Invertase as the Reporter Catalyst. Annals of the New York Academy of Sciences, 1995, 750, 441-443.	3.8	1
114	Screening and Design of Immobilized Biocatalysts by Means of Kinetic Characterization on Enzyme Thermistor/Thermal Assay Probe. Advances in Molecular and Cell Biology, 1996, , 411-419.	0.1	1
115	New Approaches for the Verification of Kinetic Parameters of Immobilized Concanavalin A: Invertase Preparations Investigated by Flow Microcalorimetry. Annals of the New York Academy of Sciences, 1996, 799, 102-107.	3.8	0
116	Screening and design of immobilized biocatalysts through the kinetic characterization by flow microcalorimetry. Progress in Biotechnology, 1996, , 320-327.	0.2	0
117	A mediatorless electrochemical detection of NADH on a biopolymer dispersed carbon nanotube layer. , 2009, , .		0