Alexander V Gusakov

List of Publications by Year
in descending order

83 papers	3,363 citations	159358 30 h-index	149479 56 g-index
85 all docs	85 docs citations	85 times ranked	2732 citing authors

#	Article	IF	Citations
1	Alternatives to Trichoderma reesei in biofuel production. Trends in Biotechnology, 2011, 29, 419-425.	4.9	326
2	Design of highly efficient cellulase mixtures for enzymatic hydrolysis of cellulose. Biotechnology and Bioengineering, 2007, 97, 1028-1038.	1.7	203
3	Effect of structural and physico-chemical features of cellulosic substrates on the efficiency of enzymatic hydrolysis. Applied Biochemistry and Biotechnology, 1991, 30, 43-59.	1.4	184
4	Evaluation of novel fungal cellulase preparations for ability to hydrolyze softwood substrates â€“ evidence for the role of accessory enzymes. Enzyme and Microbial Technology, 2005, 37, 175-184.	1.6	184
5	Comparison of Two Methods for Assaying Reducing Sugars in the Determination of Carbohydrase Activities. International Journal of Analytical Chemistry, 2011, 2011, 1-4.	0.4	176
6	RESEARCH: Development of a mature fungal technology and production platform for industrial enzymes based on a <i>Myceliophthora thermophila</i> isolate, previously known as <i>Chrysosporium lucknowense</i> C1. Industrial Biotechnology, 2011, 7, 214-223.	0.5	140
7	Specific xyloglucanases as a new class of polysaccharide-degrading enzymes. Biochimica Et Biophysica Acta - General Subjects, 2004, 1674, 268-281.	1.1	129
8	Cellulases of <i>Penicillium verruculosum</i>. Biotechnology Journal, 2010, 5, 871-880.	1.8	89
9	A theoretical analysis of cellulase product inhibition: Effect of cellulase binding constant, enzyme/substrate ratio, and Î²-glucosidase activity on the inhibition pattern. Biotechnology and Bioengineering, 1992, 40, 663-671.	1.7	84
10	Cellulases from<i>Penicillium</i>species for producing fuels from biomass. Biofuels, 2012, 3, 463-477.	1.4	78
11	Purification, cloning and characterisation of two forms of thermostable and highly active cellobiohydrolase I (Cel7A) produced by the industrial strain of Chrysosporium lucknowense. Enzyme and Microbial Technology, 2005, 36, 57-69.	1.6	77
12	Surface hydrophobic amino acid residues in cellulase molecules as a structural factor responsible for their high denim-washing performance. Enzyme and Microbial Technology, 2000, 27, 664-671.	1.6	71
13	Evaluation of Cellulase Preparations for Hydrolysis of Hardwood Substrates. Applied Biochemistry and Biotechnology, 2006, 130, 528-545.	1.4	62
14	Kinetics of the enzymatic hydrolysis of cellulose: 1. A mathematical model for a batch reactor process. Enzyme and Microbial Technology, 1985, 7, 346-352.	1.6	61
15	A lichenase-like family 12 endo-(1â†’4)-Î²-glucanase from Aspergillus japonicus: study of the substrate specificity and mode of action on Î²-glucans in comparison with other glycoside hydrolases. Carbohydrate Research, 2006, 341, 218-229.	1.1	56
16	Comparison of properties and mode of action of six secreted xylanases from Chrysosporium lucknowense. Enzyme and Microbial Technology, 2008, 43, 56-65.	1.6	55
17	Isolation and properties of pectinases from the fungus Aspergillus japonicus. Biochemistry (Moscow), 2003, 68, 559-569.	0.7	54
18	<i>N</i>â€linked glycosylation of recombinant cellobiohydrolase I (Cel7A) from <i>Penicillium verruculosum</i> and its effect on the enzyme activity. Biotechnology and Bioengineering, 2016, 113, 283-291.	1.7	54

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19	Cellulase Complex of the Fungus Chrysosporium lucknowense: Isolation and Characterization of Endoglucanases and Cellobiohydrolases. Biochemistry (Moscow), 2004, 69, 542-551.	0.7	51
20	Isolation and Properties of Major Components of Penicillium canescens Extracellular Enzyme Complex. Biochemistry (Moscow), 2003, 68, 1200-1209.	0.7	48
21	Disulfide Bond Engineering of an Endoglucanase from Penicillium verruculosum to Improve Its Thermostability. International Journal of Molecular Sciences, 2019, 20, 1602.	1.8	45
22	Complex effect of lignocellulosic biomass pretreatment with 1-butyl-3-methylimidazolium chloride ionic liquid on various aspects of ethanol and fumaric acid production by immobilized cells within SSF. Bioresource Technology, 2018, 250, 429-438.	4.8	44
23	Use of a preparation from fungal pectin lyase in the food industry. Applied Biochemistry and Microbiology, 2006, 42, 598-602.	0.3	42
24	Cellulases and hemicellulases in the 21st century race for cellulosic ethanol. Biofuels, 2013, 4, 567-569.	1.4	42
25	Study of protein adsorption on indigo particles confirms the existence of enzymeâ€“indigo interaction sites in cellulase molecules. Journal of Biotechnology, 2001, 87, 83-90.	1.9	40
26	Heterologous Î²-glucosidase in a fungal cellulase system: Comparison of different methods for development of multienzyme cocktails. Process Biochemistry, 2015, 50, 1258-1263.	1.8	37
27	Using an Inducible Promoter of a Gene Encoding Penicillium verruculosum Glucoamylase for Production of Enzyme Preparations with Enhanced Cellulase Performance. PLoS ONE, 2017, 12, e0170404.	1.1	34
28	Factors affecting the enzymatic hydrolysis of cellulose in batch and continuous reactors: Computer simulation and experiment. Biotechnology and Bioengineering, 1987, 29, 906-910.	1.7	33
29	Isolation and characterization of extracellular pectin lyase from Penicillium canescens. Biochemistry (Moscow), 2007, 72, 565-571.	0.7	32
30	Site-directed mutagenesis of GH10 xylanase A from Penicillium canescens for determining factors affecting the enzyme thermostability. International Journal of Biological Macromolecules, 2017, 104, 665-671.	3.6	31
31	New Effective Method for Analysis of the Component Composition of Enzyme Complexes from Trichoderma reesei. Biochemistry (Moscow), 2005, 70, 657-663.	0.7	29
32	Effect of<i>N</i>-linked glycosylation on the activity and other properties of recombinant endoglucanase IIa (Cel5A) from<i>Penicillium verruculosum</i>. Protein Engineering, Design and Selection, 2016, 29, 495-502.	1.0	28
33	Kinetics and mathematical model of hydrolysis and transglycosylation catalysed by cellobiase. Enzyme and Microbial Technology, 1984, 6, 275-282.	1.6	27
34	Isolation of homogeneous polysaccharide monooxygenases from fungal sources and investigation of their synergism with cellulases when acting on cellulose. Biochemistry (Moscow), 2016, 81, 530-537.	0.7	27
35	Decrease in reactivity and change of physico-chemical parameters of cellulose in the course of enzymatic hydrolysis. Carbohydrate Polymers, 1989, 10, 1-14.	5.1	26
36	Proteinaceous inhibitors of microbial xylanases. Biochemistry (Moscow), 2010, 75, 1185-1199.	0.7	26

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37	A product inhibition study of cellulases from Trichoderma longibrachiatum using dyed cellulose. Journal of Biotechnology, 1985, 3, 167-174.	1.9	25
38	A Comparative Study of Different Cellulase Preparations in the Enzymatic Treatment of Cotton Fabrics. Applied Biochemistry and Biotechnology, 2000, 88, 119-126.	1.4	25
39	Critical effect of proline on thermostability of endoglucanase II from Penicillium verruculosum. Biochemical Engineering Journal, 2019, 152, 107395.	1.8	25
40	N-Linked glycans are an important component of the processive machinery of cellobiohydrolases. Biochimie, 2017, 132, 102-108.	1.3	23
41	Enzymatic saccharification of industrial and agricultural lignocellulosic wastes. Applied Biochemistry and Biotechnology, 1992, 34-35, 625-637.	1.4	22
42	Studies of hydrolytic activity of enzyme preparations of Penicillium and Trychoderma fungi. Applied Biochemistry and Microbiology, 2005, 41, 182-184.	0.3	22
43	Homologous cloning, purification and characterization of highly active cellobiohydrolase I (Cel7A) from Penicillium canescens. Protein Expression and Purification, 2014, 103, 1-7.	0.6	22
44	Tissue Specificity of Human Angiotensin I-Converting Enzyme. PLoS ONE, 2015, 10, e0143455.	1.1	22
45	Application of microassays for investigation of cellulase abrasive activity and backstaining. Journal of Biotechnology, 2001, 89, 233-238.	1.9	21
46	New cellulases efficiently hydrolyzing lignocellulose pulp. Applied Biochemistry and Microbiology, 2006, 42, 592-597.	0.3	21
47	Mass spectrometry in the study of extracellular enzymes produced by filamentous fungi. Journal of Analytical Chemistry, 2010, 65, 1446-1461.	0.4	21
48	Kinetics of the enzymatic hydrolysis of cellulose: 2. A mathematical model for the process in a plug-flow column reactor. Enzyme and Microbial Technology, 1985, 7, 383-388.	1.6	20
49	Engineering the pH-optimum of activity of the GH12 family endoglucanase by site-directed mutagenesis. Biochimie, 2013, 95, 1704-1710.	1.3	20
50	Enhancement of the enzymatic cellulose saccharification by Penicillium verruculosum multienzyme cocktails containing homologously overexpressed lytic polysaccharide monooxygenase. Molecular Biology Reports, 2019, 46, 2363-2370.	1.0	20
51	Properties of a recombinant GH49 family dextranase heterologously expressed in two recipient strains of Penicillium species. Biochimie, 2019, 157, 123-130.	1.3	20
52	Purification and characterization of two forms of the homologously expressed lytic polysaccharide monooxygenase (PvLPMO9A) from Penicillium verruculosum. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140297.	1.1	20
53	Isolation and properties of extracellular Î²-xylosidases from fungi Aspergillus japonicus and Trichoderma reesei. Biochemistry (Moscow), 2009, 74, 1002-1008.	0.7	19
54	Monitoring of reactions catalyzed by lytic polysaccharide monooxygenases using highly-sensitive fluorimetric assay of the oxygen consumption rate. Carbohydrate Research, 2017, 452, 156-161.	1.1	19

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55	Interaction between indigo and adsorbed protein as a major factor causing backstaining during cellulase treatment of cotton fabrics. Applied Biochemistry and Biotechnology, 1998, 75, 279-293.	1.4	18
56	N-Glycosylation in Chrysosporium lucknowense enzymes. Carbohydrate Research, 2008, 343, 48-55.	1.1	18
57	Enhancement of enzymatic cellulose hydrolysis using a novel type of bioreactor with intensive stirring induced by electromagnetic field. Applied Biochemistry and Biotechnology, 1996, 56, 141-153.	1.4	17
58	A hyperefficient process for enzymatic cellulose hydrolysis in the intensive mass transfer reactor. Biotechnology Letters, 1993, 15, 283-288.	1.1	16
59	Transglycosylation activity of cellobiohydrolase I from Trichoderma longibrachiatum on synthetic and natural substrates. Biochimica Et Biophysica Acta - General Subjects, 1991, 1073, 481-485.	1.1	15
60	Isolation and properties of recombinant inulinases from Aspergillus sp.. Biochemistry (Moscow), 2012, 77, 492-501.	0.7	14
61	Recombinant Endo-Â-1,4-xylanase from Penicillium canescens. Biochemistry (Moscow), 2003, 68, 1313-1319.	0.7	13
62	Protein engineering of GH10 family xylanases for gaining a resistance to cereal proteinaceous inhibitors. Biocatalysis and Agricultural Biotechnology, 2019, 17, 690-695.	1.5	13
63	Enzymatic hydrolysis of cellulosic materials using synthetic mixtures of purified cellulases bioengineered at N-glycosylation sites. 3 Biotech, 2018, 8, 396.	1.1	12
64	A theoretical comparison of the reactors for the enzymatic hydrolysis of cellulose. Biotechnology and Bioengineering, 1987, 29, 898-900.	1.7	10
65	Properties of hemicellulases of the enzyme complex from Trichoderma longibrachiatum. Applied Biochemistry and Microbiology, 2006, 42, 573-583.	0.3	10
66	Comparative characterization of xylanases XylA and XylE from Penicillium canescens fungi. Moscow University Chemistry Bulletin, 2015, 70, 278-282.	0.2	10
67	Properties and N-glycosylation of recombinant endoglucanase II from Penicillium verruculosum. Moscow University Chemistry Bulletin, 2015, 70, 283-286.	0.2	10
68	N-Glycosylation patterns in two Î±-l-arabinofuranosidases from Penicillium canescens belonging to the glycoside hydrolase families 51 and 54. Carbohydrate Research, 2013, 382, 71-76.	1.1	9
69	Viscometric method for assaying of total endodepolymerase activity of pectinases. Biochemistry (Moscow), 2002, 67, 676-682.	0.7	7
70	Glucoamylases from Penicillium verruculosum and Myceliophthora thermophila: Analysis of differences in activity against polymeric substrates based on 3D model structures of the intact enzymes. Biochimie, 2015, 110, 45-51.	1.3	7
71	Conformational â€œFingerprintâ€• of the Angiotensin-Converting Enzyme. Russian Journal of Bioorganic Chemistry, 2018, 44, 52-63.	0.3	7
72	Detection of Major Xylanase-Containing Cellulose-Binding Domain from Penicillium verruculosumby Combination of Chromatofocusing and Limited Proteolysis. Applied Biochemistry and Biotechnology, 2000, 88, 345-352.	1.4	6

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73	ORIGINAL RESEARCH: Assaying sensitivity of fungal xylanases to proteinaceous inhibitors from a rye extract: Two GH10 family xylanases resistant to XIP-like inhibitors. Industrial Biotechnology, 2009, 5, 104-109.	0.5	6
74	Comment on â€œRevealing Natureâ€™s Cellulase Diversity: The Digestion Mechanism of <i>Caldicellulosiruptor bescii</i> CelAâ€• Science, 2014, 344, 578-578.	6.0	6
75	Comparison of Three Protein Assays for Purified Cellulases and Hemicellulases from Fungi. Open Journal of Analytical Chemistry Research, 2013, 1, 1.	0.2	5
76	Enzymatic Hydrolysis of Cellulose Using Mixes of Mutant Forms of Cellulases from Penicillium verruculosum. Moscow University Chemistry Bulletin, 2018, 73, 58-62.	0.2	5
77	A Fortran Program for Evaluation of the Effectiveness Factor of Biocatalysts in the Presence of External and Internal Diffusional Limitations. Biocatalysis, 1988, 1, 301-320.	0.9	4
78	Additional sequence and structural characterization of an endo-processive GH74 xyloglucanase from Myceliophthora thermophila and the revision of the EC 3.2.1.155 entry. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129511.	1.1	4
79	Improving the efficiency of the bioconversion of plant raw materials with mutant cellulases of Penicillium verruculosum. Catalysis in Industry, 2017, 9, 71-76.	0.3	3
80	Properties of Chimeric Polysaccharide Monooxygenase with an Attached Cellulose Binding Module and Its Use in the Hydrolysis of Cellulose-Containing Materials in the Composition of Cellulase Complexes. Catalysis in Industry, 2018, 10, 152-158.	0.3	2
81	Evaluation of Cellulase Preparations for Hydrolysis of Hardwood Substrates. , 2006, , 528-545.		2
82	Structural investigation of endoglucanase 2 from the filamentous fungus Penicillium verruculosum. Crystallography Reports, 2017, 62, 254-259.	0.1	1
83	Molecular dynamics simulations of two GH74 endo-processive xyloglucanases and the mutated variants to understand better the mechanism of the enzyme action. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129721.	1.1	1