Roman Brunecky

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/6392285/publications.pdf

Version: 2024-02-01

45 papers	2,243 citations	279798 23 h-index	265206 42 g-index
48 all docs	48 docs citations	48 times ranked	3001 citing authors

#	Article	IF	Citations
1	Spin-dependent charge transport through 2D chiral hybrid lead-iodide perovskites. Science Advances, 2019, 5, eaay0571.	10.3	275
2	Revealing Natureâ€™s Cellulase Diversity: The Digestion Mechanism of <i>Caldicellulosiruptor bescii</i> CelA. Science, 2013, 342, 1513-1516.	12.6	253
3	In planta expression of A. cellulolyticus Cel5A endocellulase reduces cell wall recalcitrance in tobacco and maize. Biotechnology for Biofuels, 2011, 4, 1.	6.2	217
4	Highly Distorted Chiral Two-Dimensional Tin Iodide Perovskites for Spin Polarized Charge Transport. Journal of the American Chemical Society, 2020, 142, 13030-13040.	13.7	198
5	Heterologous expression of glycosyl hydrolases in planta: a new departure for biofuels. Trends in Biotechnology, 2008, 26, 413-424.	9.3	115
6	Strategies to Achieve High Circularly Polarized Luminescence from Colloidal Organicâ€“Inorganic Hybrid Perovskite Nanocrystals. ACS Nano, 2020, 14, 8816-8825.	14.6	94
7	Charge engineering of cellulases improves ionic liquid tolerance and reduces lignin inhibition. Biotechnology and Bioengineering, 2014, 111, 1541-1549.	3.3	91
8	Cellulase Linkers Are Optimized Based on Domain Type and Function: Insights from Sequence Analysis, Biophysical Measurements, and Molecular Simulation. PLoS ONE, 2012, 7, e48615.	2.5	88
9	High-Throughput Screening Techniques for Biomass Conversion. Bioenergy Research, 2009, 2, 179-192.	3.9	82
10	ORIGINAL RESEARCH: Lignocellulose recalcitrance screening by integrated high-throughput hydrothermal pretreatment and enzymatic saccharification. Industrial Biotechnology, 2010, 6, 104-111.	0.8	80
11	Probing the role of N-linked glycans in the stability and activity of fungal cellobiohydrolases by mutational analysis. Cellulose, 2009, 16, 699-709.	4.9	79
12	Redistribution of xylan in maize cell walls during dilute acid pretreatment. Biotechnology and Bioengineering, 2009, 102, 1537-1543.	3.3	53
13	The Multi Domain Caldicellulosiruptor bescii CelA Cellulase Excels at the Hydrolysis of Crystalline Cellulose. Scientific Reports, 2017, 7, 9622.	3.3	43
14	The Structural Origin of Chiroptical Properties in Perovskite Nanocrystals with Chiral Organic Ligands. Advanced Functional Materials, 2022, 32, .	14.9	43
15	Bioprospecting metagenomics of decaying wood: mining for new glycoside hydrolases. Biotechnology for Biofuels, 2011, 4, 23.	6.2	40
16	Improving activity of minicellulosomes by integration of intra- and intermolecular synergies. Biotechnology for Biofuels, 2013, 6, 126.	6.2	37
17	Cel48A from <i>Thermobifida fusca</i>: Structure and site directed mutagenesis of key residues. Biotechnology and Bioengineering, 2014, 111, 664-673.	3.3	35
18	High activity CAZyme cassette for improving biomass degradation in thermophiles. Biotechnology for Biofuels, 2018, 11, 22.	6.2	35

#	Article	IF	Citations
19	Investigation of the Binding Geometry of a Peripheral Membrane Proteinâ€. Biochemistry, 2005, 44, 16064-16071.	2.5	34
20	Sequence, Structure, and Evolution of Cellulases in Glycoside Hydrolase Family 48. Journal of Biological Chemistry, 2012, 287, 41068-41077.	3.4	32
21	Expression of the Acidothermus cellulolyticus E1 endoglucanase in Caldicellulosiruptor bescii enhances its ability to deconstruct crystalline cellulose. Biotechnology for Biofuels, 2015, 8, 113.	6.2	31
22	Synthetic fungal multifunctional cellulases for enhanced biomass conversion. Green Chemistry, 2020, 22, 478-489.	9.0	31
23	The Unique Binding Mode of Cellulosomal CBM4 from Clostridium thermocellum Cellobiohydrolase A. Journal of Molecular Biology, 2010, 402, 374-387.	4.2	28
24	Impact of alg3 gene deletion on growth, development, pigment production, protein secretion, and functions of recombinant Trichoderma reesei cellobiohydrolases in Aspergillus niger. Fungal Genetics and Biology, 2013, 61, 120-132.	2.1	25
25	Crystal structure and biochemical characterization of Chlamydomonas FDX2 reveal two residues that, when mutated, partially confer FDX2 the redox potential and catalytic properties of FDX1. Photosynthesis Research, 2016, 128, 45-57.	2.9	22
26	Investigation of the role of lignin in biphasic xylan hydrolysis during dilute acid and organosolv pretreatment of corn stover. Green Chemistry, 2015, 17, 1546-1558.	9.0	20
27	Glycosylation Is Vital for Industrial Performance of Hyperactive Cellulases. ACS Sustainable Chemistry and Engineering, 2019, 7, 4792-4800.	6.7	19
28	Structure and function of theClostridium thermocellumcellobiohydrolase A X1-module repeat: enhancement through stabilization of the CbhA complex. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 292-299.	2.5	15
29	The catalytic mechanism and unique low pH optimum of<i>Caldicellulosiruptor bescii</i>family 3 pectate lyase. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 1946-1954.	2.5	14
30	Identifying the ionically bound cell wall and intracellular glycoside hydrolases in late growth stage Arabidopsis stems: implications for the genetic engineering of bioenergy crops. Frontiers in Plant Science, 2015, 6, 315.	3.6	14
31	Structure of a fibronectin type III-like module fromClostridium thermocellum. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 878-880.	0.7	12
32	High temperature pre-digestion of corn stover biomass for improved product yields. Biotechnology for Biofuels, 2014, 7, 170.	6.2	11
33	Strategies to reduce endâ€product inhibition in family 48 glycoside hydrolases. Proteins: Structure, Function and Bioinformatics, 2016, 84, 295-304.	2.6	10
34	Towards an Understanding of Enhanced Biomass Digestibility by In Planta Expression of a Family 5 Glycoside Hydrolase. Scientific Reports, 2017, 7, 4389.	3.3	9
35	The structure and mode of action ofCaldicellulosiruptor besciifamily 3 pectate lyase in biomass deconstruction. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 534-539.	2.5	7
36	Biomass Conversion. , 2017, , 285-419.		7

#	ARTICLE	IF	CITATIONS
37	Natural diversity of glycoside hydrolase family 48 exoglucanases: insights from structure. Biotechnology for Biofuels, 2017, 10, 274.	6.2	7
38	Undefined cellulase formulations hinder scientific reproducibility. Biotechnology for Biofuels, 2017, 10, 283.	6.2	7
39	A Swollenin From Talaromyces leycettanus JCM12802 Enhances Cellulase Hydrolysis Toward Various Substrates. Frontiers in Microbiology, 2021, 12, 658096.	3.5	7
40	New Insights into Microbial Strategies for Biomass Conversion. , 2015, , 111-127.		4
41	Analysis of Transgenic Glycoside Hydrolases Expressed in Plants: T. reesei CBH I and A. cellulolyticus EI. Methods in Molecular Biology, 2012, 908, 197-211.	0.9	3
42	Handling gene and protein names in the age of bioinformatics: the special challenge of secreted multimodular bacterial enzymes such as the cbhA/cbh9A gene of Clostridium thermocellum. World Journal of Microbiology and Biotechnology, 2018, 34, 42.	3.6	2
43	Substitution of distal and active site residues reduces product inhibition of E1 from <i>Acidothermus Cellulolyticus</i>. Protein Engineering, Design and Selection, 2021, 34, .	2.1	2
44	Response to Comment on â€œRevealing Natureâ€™s Cellulase Diversity: The Digestion Mechanism of <i>Caldicellulosiruptor bescii</i> CelAâ€. Science, 2014, 344, 578-578.	12.6	1
45	Feedstock Engineering and Biomass Pretreatments. , 2015, , 3-12.		1