James F Matthews

List of Publications by Year
in descending order

18 papers	1,627 citations	471509 17 h-index	888059 17 g-index
18 all docs	18 docs citations	18 times ranked	1843 citing authors

#	Article	IF	Citations
1	Computer simulation studies of microcrystalline cellulose Iβ. Carbohydrate Research, 2006, 341, 138-152.	2.3	357
2	Molecular-Level Origins of Biomass Recalcitrance: Decrystallization Free Energies for Four Common Cellulose Polymorphs. Journal of Physical Chemistry B, 2011, 115, 4118-4127.	2.6	185
3	High-Temperature Behavior of Cellulose I. Journal of Physical Chemistry B, 2011, 115, 2155-2166.	2.6	121
4	Identification of Amino Acids Responsible for Processivity in a Family 1 Carbohydrate-Binding Module from a Fungal Cellulase. Journal of Physical Chemistry B, 2010, 114, 1447-1453.	2.6	116
5	Comparison of Cellulose Iβ Simulations with Three Carbohydrate Force Fields. Journal of Chemical Theory and Computation, 2012, 8, 735-748.	5.3	113
6	Harnessing glycosylation to improve cellulase activity. Current Opinion in Biotechnology, 2012, 23, 338-345.	6.6	107
7	The O-Glycosylated Linker from the Trichoderma reesei Family 7 Cellulase Is a Flexible, Disordered Protein. Biophysical Journal, 2010, 99, 3773-3781.	0.5	96
8	Molecular modeling suggests induced fit of Family I carbohydrate-binding modules with a broken-chain cellulose surface. Protein Engineering, Design and Selection, 2007, 20, 179-187.	2.1	79
9	Binding Preferences, Surface Attachment, Diffusivity, and Orientation of a Family 1 Carbohydrate-binding Module on Cellulose. Journal of Biological Chemistry, 2012, 287, 20603-20612.	3.4	76
10	The Energy Landscape for the Interaction of the Family 1 Carbohydrate-Binding Module and the Cellulose Surface is Altered by Hydrolyzed Glycosidic Bonds. Journal of Physical Chemistry B, 2009, 113, 10994-11002.	2.6	75
11	3D Electron Tomography of Pretreated Biomass Informs Atomic Modeling of Cellulose Microfibrils. ACS Nano, 2013, 7, 8011-8019.	14.6	68
12	Computational simulations of the Trichoderma reesei cellobiohydrolase I acting on microcrystalline cellulose Iβ: the enzyme–substrate complex. Carbohydrate Research, 2009, 344, 1984-1992.	2.3	49
13	Interactions of the complete cellobiohydrolase I from Trichodera reesei with microcrystalline cellulose Iβ. Cellulose, 2008, 15, 261-273.	4.9	46
14	Modeling the Self-assembly of the Cellulosome Enzyme Complex. Journal of Biological Chemistry, 2011, 286, 5614-5623.	3.4	43
15	Coarse-Grain Model for Glucose, Cellobiose, and Cellotetraose in Water. Journal of Chemical Theory and Computation, 2011, 7, 2137-2150.	5.3	28
16	Conversion of cellulose Iα to Iβ via a high temperature intermediate (I-HT) and other cellulose phase transformations. Cellulose, 2012, 19, 297-306.	4.9	27
17	Simulations of the Structure of Cellulose. ACS Symposium Series, 2010, , 17-53.	0.5	24
18	Structures of Plant Cell Wall Celluloses. , 0, , 188-212.		17