

# David Humbird

## List of Publications by Citations

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29  
papers

880  
citations

19  
h-index

29  
g-index

30  
ext. papers

1,017  
ext. citations

4.1  
avg, IF

4.36  
L-index

#	Paper	IF	Citations
29	The Techno-Economic Basis for Coproduct Manufacturing To Enable Hydrocarbon Fuel Production from Lignocellulosic Biomass. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2016</b> , 4, 3196-3211	8.3	101
28	Economic impact of total solids loading on enzymatic hydrolysis of dilute acid pretreated corn stover. <i>Biotechnology Progress</i> , <b>2010</b> , 26, 1245-51	2.8	77
27	Process Design and Economics for the Production of Algal Biomass: Algal Biomass Production in Open Pond Systems and Processing Through Dewatering for Downstream Conversion		69
26	Conceptual Process Design and Techno-Economic Assessment of Ex Situ Catalytic Fast Pyrolysis of Biomass: A Fixed Bed Reactor Implementation Scenario for Future Feasibility. <i>Topics in Catalysis</i> , <b>2016</b> , 59, 2-18	2.3	68
25	Surface chemistry associated with plasma etching processes. <i>Applied Surface Science</i> , <b>2002</b> , 192, 72-87	6.7	49
24	Atomistic simulations of spontaneous etching of silicon by fluorine and chlorine. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 791-798	2.5	48
23	Improved interatomic potentials for silicon-fluorine and silicon-chlorine. <i>Journal of Chemical Physics</i> , <b>2004</b> , 120, 2405-12	3.9	48
22	Aeration costs in stirred-tank and bubble column bioreactors. <i>Biochemical Engineering Journal</i> , <b>2017</b> , 127, 161-166	4.2	35
21	Process Design and Economics for the Conversion of Lignocellulosic Biomass to Hydrocarbon Fuels. Thermochemical Research Pathways with In Situ and Ex Situ Upgrading of Fast Pyrolysis Vapors		34
20	Conceptual process design and economics for the production of high-octane gasoline blendstock via indirect liquefaction of biomass through methanol/dimethyl ether intermediates. <i>Biofuels, Bioproducts and Biorefining</i> , <b>2016</b> , 10, 17-35	5.3	34
19	Fluorocarbon plasma etching of silicon: Factors controlling etch rate. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 65-70	2.5	32
18	Uncertainty in techno-economic estimates of cellulosic ethanol production due to experimental measurement uncertainty. <i>Biotechnology for Biofuels</i> , <b>2012</b> , 5, 23	7.8	28
17	Molecular dynamics simulations of Ar <sup>+</sup> -induced transport of fluorine through fluorocarbon films. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 1073-1075	3.4	26
16	Atomistic simulations of Ar <sup>+</sup> -ion-assisted etching of silicon by fluorine and chlorine. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2005</b> , 23, 31-38	2.9	25
15	Process Design and Economics for the Conversion of Lignocellulosic Biomass to Hydrocarbons via Indirect Liquefaction. Thermochemical Research Pathway to High-Octane Gasoline Blendstock Through Methanol/Dimethyl Ether Intermediates		22
14	One-Dimensional Biomass Fast Pyrolysis Model with Reaction Kinetics Integrated in an Aspen Plus Biorefinery Process Model. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2017</b> , 5, 2463-2470	8.3	21
13	Mechanism of silicon etching in the presence of CF <sub>2</sub> , F, and Ar <sup>+</sup> . <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 2466-2471	2.1	21

12	Silicon etch by fluorocarbon and argon plasmas in the presence of fluorocarbon films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2005</b> , 23, 1598-1604	2.9	21
11	Ion-induced damage and annealing of silicon. Molecular dynamics simulations. <i>Pure and Applied Chemistry</i> , <b>2002</b> , 74, 419-422	2.1	20
10	Molecular dynamics simulations of Si $\beta$ surface chemistry with improved interatomic potentials. <i>Plasma Sources Science and Technology</i> , <b>2004</b> , 13, 548-552	3.5	17
9	Effect of corn stover compositional variability on minimum ethanol selling price (MESP). <i>Bioresource Technology</i> , <b>2013</b> , 140, 426-30	11	15
8	Molecular dynamics simulations of Ar <sup>+</sup> bombardment of Si with comparison to experiment. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2007</b> , 25, 1529-1533	2.9	13
7	Scale-up economics for cultured meat. <i>Biotechnology and Bioengineering</i> , <b>2021</b> , 118, 3239-3250	4.9	12
6	Controlling surfaces in plasma processing: role of ions via molecular dynamics simulations of surface chemistry. <i>Plasma Sources Science and Technology</i> , <b>2002</b> , 11, A191-A195	3.5	11
5	Computational fluid dynamics study of full-scale aerobic bioreactors: Evaluation of gas-liquid mass transfer, oxygen uptake, and dynamic oxygen distribution. <i>Chemical Engineering Research and Design</i> , <b>2018</b> , 139, 283-295	5.5	11
4	Silicon etch in the presence of a fluorocarbon overlayer: The role of fluorocarbon cluster ejection. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2008</b> , 26, 52-61	2.9	7
3	Scale-Up Considerations for Biofuels <b>2016</b> , 513-537		7
2	Molecular dynamics simulations of plasma-surface interactions: importance of visualization tools. <i>IEEE Transactions on Plasma Science</i> , <b>2005</b> , 33, 226-227	1.3	2
1	Molecular dynamics study of silicon atomic layer etching by chlorine gas and argon ions. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2022</b> , 40, 023205	1.3	2