

# David Humbird

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	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
28	Scale-up economics for cultured meat. <i>Biotechnology and Bioengineering</i> , <b>2021</b> , 118, 3239-3250	4.9	12
27	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
26	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
25	Aeration costs in stirred-tank and bubble column bioreactors. <i>Biochemical Engineering Journal</i> , <b>2017</b> , 127, 161-166	4.2	35
24	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
23	Scale-Up Considerations for Biofuels <b>2016</b> , 513-537		7
22	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
21	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
20	Effect of corn stover compositional variability on minimum ethanol selling price (MESP). <i>Bioresource Technology</i> , <b>2013</b> , 140, 426-30	11	15
19	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
18	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
17	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
16	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
15	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
14	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
13	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

12	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
11	Fluorocarbon plasma etching of silicon: Factors controlling etch rate. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 65-70	2.5	32
10	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	2.5	21
9	Molecular dynamics simulations of SiF <sub>4</sub> surface chemistry with improved interatomic potentials. <i>Plasma Sources Science and Technology</i> , <b>2004</b> , 13, 548-552	3.5	17
8	Improved interatomic potentials for silicon-fluorine and silicon-chlorine. <i>Journal of Chemical Physics</i> , <b>2004</b> , 120, 2405-12	3.9	48
7	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
6	Surface chemistry associated with plasma etching processes. <i>Applied Surface Science</i> , <b>2002</b> , 192, 72-87	6.7	49
5	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
4	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
3	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
2	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
1	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