

Nicholas A Rorrer

List of Publications by Citations

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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.

25
papers

1,283
citations

15
h-index

30
g-index

30
ext. papers

2,052
ext. citations

14.3
avg, IF

4.67
L-index

#	Paper	IF	Citations
25	Characterization and engineering of a plastic-degrading aromatic polyestherase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E4350-E4357	11.5	369
24	Heterogeneous Diels-Alder catalysis for biomass-derived aromatic compounds. <i>Green Chemistry</i> , 2017 , 19, 3468-3492	10	145
23	cis,cis-Muconic acid: separation and catalysis to bio-adipic acid for nylon-6,6 polymerization. <i>Green Chemistry</i> , 2016 , 18, 3397-3413	10	109
22	Characterization and engineering of a two-enzyme system for plastics depolymerization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 25476-25485	11.5	90
21	Combining Reclaimed PET with Bio-based Monomers Enables Plastics Upcycling. <i>Joule</i> , 2019 , 3, 1006-1027	7.8	84
20	Chemical and biological catalysis for plastics recycling and upcycling. <i>Nature Catalysis</i> , 2021 , 4, 539-556	36.5	78
19	Innovative Chemicals and Materials from Bacterial Aromatic Catabolic Pathways. <i>Joule</i> , 2019 , 3, 1523-1537	7.8	66
18	Renewable Unsaturated Polyesters from Muconic Acid. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 6867-6876	8.3	56
17	Manufacturing energy and greenhouse gas emissions associated with plastics consumption. <i>Joule</i> , 2021 , 5, 673-686	27.8	47
16	Bio-based polymers with performance-advantaged properties. <i>Nature Reviews Materials</i> ,	73.3	41
15	Biomass-derived monomers for performance-differentiated fiber reinforced polymer composites. <i>Green Chemistry</i> , 2017 , 19, 2812-2825	10	36
14	Techno-economic, life-cycle, and socioeconomic impact analysis of enzymatic recycling of poly(ethylene terephthalate). <i>Joule</i> , 2021 , 5, 2479-2503	27.8	25
13	Post-Fermentation Recovery of Biobased Carboxylic Acids. <i>ACS Sustainable Chemistry and Engineering</i> , 2018 , 6, 15273-15283	8.3	16
12	Finding the Missing Physics: Mapping Polydispersity into Lattice-Based Simulations. <i>Macromolecules</i> , 2014 , 47, 3185-3191	5.5	15
11	Tandem chemical deconstruction and biological upcycling of poly(ethylene terephthalate) to Eketo adipic acid by <i>Pseudomonas putida</i> KT2440. <i>Metabolic Engineering</i> , 2021 , 67, 250-261	9.7	15
10	The formation of hydrophobic films on silica with alcohols. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2010 , 362, 65-70	5.1	13
9	Iodine-Catalyzed Isomerization of Dimethyl Muconate. <i>ChemSusChem</i> , 2018 , 11, 1768-1780	8.3	11

8	Molecular scale simulation of homopolymer wall slip. <i>Physical Review Letters</i> , 2013 , 110, 176001	7.4	11
7	Molecular-scale simulation of cross-flow migration in polymer melts. <i>Physical Review E</i> , 2014 , 90, 052603	7.4	10
6	The Critical Role of Process Analysis in Chemical Recycling and Upcycling of Waste Plastics.. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2022 ,	8.9	10
5	Comparative Performance of PETase as a Function of Reaction Conditions, Substrate Properties, and Product Accumulation. <i>ChemSusChem</i> , 2021 ,	8.3	9
4	Effects of polydispersity on confined homopolymer melts: a Monte Carlo study. <i>Journal of Chemical Physics</i> , 2014 , 141, 214905	3.9	7
3	Parameter Free Prediction of Rheological Properties of Homopolymer Melts by Dynamic Monte Carlo Simulation. <i>Macromolecules</i> , 2012 , 45, 8833-8840	5.5	7
2	Emulsion polymerization of acrylonitrile in aqueous methanol. <i>Green Chemistry</i> , 2018 , 20, 5299-5310	10	5
1	Production of ϵ -ketoadipic acid from glucose in <i>Pseudomonas putida</i> KT2440 for use in performance-advantaged nylons. <i>Cell Reports Physical Science</i> , 2022 , 3, 100840	6.1	1