Saikat Dutta

List of Publications by Year
in descending order

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112 papers	8,229 citations	53794 45 h-index	46799 89 g-index
123 all docs	123 docs citations	123 times ranked	10862 citing authors

#	Article	IF	Citations
1	Catalytic synthesis of renewable p-xylene from biomass-derived 2,5-dimethylfuran: a mini review. Biomass Conversion and Biorefinery, 2023, 13, 541-554.	4.6	29
2	Recent advances in the production and value addition of selected hydrophobic analogs of biomass-derived 5-(hydroxymethyl)furfural. Biomass Conversion and Biorefinery, 2023, 13, 2571-2593.	4.6	17
3	Valorization of biomass-derived furfurals: reactivity patterns, synthetic strategies, and applications. Biomass Conversion and Biorefinery, 2023, 13, 10361-10386.	4.6	16
4	Selective oxidation of biomass-derived furfural to 2(5H)-furanone using trifluoroacetic acid as the catalyst and hydrogen peroxide as a green oxidant. Biomass Conversion and Biorefinery, 2023, 13, 1029-1034.	4.6	7
5	[Et3NH][HSO4] as an efficient and inexpensive ionic liquid catalyst for the scalable preparation of biorenewable chemicals. Biomass Conversion and Biorefinery, 2022, 12, 5619-5625.	4.6	4
6	Chemocatalytic value addition of glucose without carbonâ€“carbon bond cleavage/formation reactions: an overview. RSC Advances, 2022, 12, 4891-4912.	3.6	9
7	Efficient Synthesis of 5-(Hydroxymethyl)furfural Esters from Polymeric Carbohydrates Using 5-(Chloromethyl)furfural as a Reactive Intermediate. ACS Sustainable Chemistry and Engineering, 2022, 10, 5803-5809.	6.7	13
8	Dehydrogenase-Functionalized Interfaced Materials in Electroenzymatic and Photoelectroenzymatic CO₂ Reduction. ACS Sustainable Chemistry and Engineering, 2022, 10, 6141-6156.	6.7	7
9	Exoskeleton for Biofunctionality Protection of Enzymes and Proteins for Intracellular Delivery. Advanced NanoBiomed Research, 2021, 1, 2000010.	3.6	3
10	Recent progress in the development of biomass-derived nitrogen-doped porous carbon. Journal of Materials Chemistry A, 2021, 9, 3703-3728.	10.3	167
11	Liquid fuel from waste tires: novel refining, advanced characterization and utilization in engines with ethyl levulinate as an additive. RSC Advances, 2021, 11, 9807-9826.	3.6	9
12	A roadmap to UV-protective natural resources: classification, characteristics, and applications. Materials Chemistry Frontiers, 2021, 5, 7696-7723.	5.9	12
13	Immunotherapy of tumors by tailored nano-zeolitic imidazolate framework protected biopharmaceuticals. Biomaterials Science, 2021, 9, 6391-6402.	5.4	6
14	Biocompatible nanoreactors of catalase and nanozymes for anticancer therapeutics. Nano Select, 2021, 2, 1849-1873.	3.7	8
15	Recent advances in the preparation of levulinic esters from biomass-derived furanic and levulinic chemical platforms using heteropoly acid (HPA) catalysts. Molecular Catalysis, 2021, 505, 111484.	2.0	25
16	Recent Advances in the Value Addition of Biomassâ€Đerived Levulinic Acid: A Review Focusing on its Chemical Reactivity Patterns. ChemCatChem, 2021, 13, 3202-3222.	3.7	41
17	Kinetics and regression analysis of phenanthrene adsorption on the nanocomposite of CaO and activated carbon: Characterization, regeneration, and mechanistic approach. Journal of Molecular Liquids, 2021, 334, 116080.	4.9	24
18	Nickel Nanoparticles Immobilized over Mesoporous SBA-15 for Efficient Carbonylative Coupling Reactions Utilizing CO₂: A Spotlight. ACS Applied Materials & Interfaces, 2021, 13, 40157-40171.	8.0	20

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19	Efficient and Scalable Production of Isoidide from Isosorbide. ACS Sustainable Chemistry and Engineering, 2021, 9, 11565-11570.	6.7	7
20	Implication of Wood-Derived Hierarchical Carbon Nanotubes for Micronutrient Delivery and Crop Biofortification. ACS Omega, 2021, 6, 23654-23665.	3.5	3
21	Energy Densification of Biomass-Derived Furfurals to Furanic Biofuels by Catalytic Hydrogenation and Hydrodeoxygenation Reactions. Sustainable Chemistry, 2021, 2, 521-549.	4.7	6
22	Selective dehydration of 1-butanol to butenes over silica supported heteropolyacid catalysts: Mechanistic aspect. Molecular Catalysis, 2021, 516, 111975.	2.0	1
23	Catalytic Transformation of Biomass-Derived Furfurals to Cyclopentanones and Their Derivatives: A Review. ACS Omega, 2021, 6, 35145-35172.	3.5	23
24	Synthesis of highly-branched alkanes for renewable gasoline. Fuel Processing Technology, 2020, 197, 106192.	7.2	26
25	Production of 5-(formyloxymethyl)furfural from biomass-derived sugars using mixed acid catalysts and upgrading into value-added chemicals. Carbohydrate Research, 2020, 497, 108140.	2.3	9
26	Total Syntheses Supramolecular Style: Solid-State Construction of [2.2]Cyclophanes with Modular Control of Stereochemistry. Crystal Growth and Design, 2020, 20, 2584-2589.	3.0	14
27	Hydrochloric acid-catalyzed coproduction of furfural and 5-(chloromethyl)furfural assisted by a phase transfer catalyst. Carbohydrate Research, 2020, 496, 108105.	2.3	7
28	Chemical and Enzymatic Routes for Lignocellulosic Bioproducts via Carbon Extension and Deoxygenation. ACS Sustainable Chemistry and Engineering, 2020, 8, 13555-13575.	6.7	2
29	Oxidation and Reduction of Biomass-Derived 5-(Hydroxymethyl)furfural and Levulinic Acid by Nanocatalysis. ACS Symposium Series, 2020, , 239-259.	0.5	5
30	Preparation of alkyl levulinates from biomass-derived 5-(halomethyl)furfural (Xâ€‰=â€‰Cl, Br), furfuryl alcohol, and angelica lactone using silica-supported perchloric acid as a heterogeneous acid catalyst. Biomass Conversion and Biorefinery, 2020, 10, 849-856.	4.6	9
31	Catalytic reduction of CO₂ into fuels and fine chemicals. Green Chemistry, 2020, 22, 4002-4033.	9.0	162
32	Hydro(deoxygenation) Reaction Network of Lignocellulosic Oxygenates. ChemSusChem, 2020, 13, 2894-2915.	6.8	19
33	Lytic Polysaccharide Monooxygenases-Driven Degradation of Biorefinery Lignocellulose. Clean Energy Production Technologies, 2020, , 297-333.	0.5	0
34	Efficient Preparation of Alkyl Benzoates by Heteropolyacidâ€Catalysed Esterification of Benzoic Acid under Solventâ€Free Condition. ChemistrySelect, 2019, 4, 9119-9123.	1.5	3
35	Nanoarchitectonics of Biofunctionalized Metalâ€“Organic Frameworks with Biological Macromolecules and Living Cells. Small Methods, 2019, 3, 1900213.	8.6	76
36	Phase Transfer Catalyst Assisted Oneâ€Pot Synthesis of 5â€(Chloromethyl)furfural from Biomassâ€Derived Carbohydrates in a Biphasic Batch Reactor. ChemistrySelect, 2019, 4, 7502-7506.	1.5	10

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37	Highâ€Yielding Synthesis of 5â€(alkoxymethyl)furfurals from Biomassâ€Derived 5â€(halomethyl)furfural (X=Cl, Br). ChemistrySelect, 2019, 4, 5540-5543.	1.5	10
38	Inhibition of Na+/K+- and Ca2+-ATPase activities by phosphotetradecavanadate. Journal of Inorganic Biochemistry, 2019, 197, 110700.	3.5	34
39	Characterization and upgradation of crude tire pyrolysis oil (CTPO) obtained from a rotating autoclave reactor. Fuel, 2019, 250, 339-351.	6.4	38
40	Fabrication of Nanoporous Carbon Materials with Hard- and Soft-Templating Approaches: A Review. Journal of Nanoscience and Nanotechnology, 2019, 19, 3673-3685.	0.9	64
41	Efficient and Scalable Production of Alkyl Levulinates from Celluloseâ€Derived Levulinic Acid Using Heteropolyacid Catalysts. ChemistrySelect, 2019, 4, 2501-2504.	1.5	10
42	Catalytic Conversion of Biomassâ€Derived Carbohydrates into Levulinic Acid Assisted by a Cationic Surface Active Agent. ChemistrySelect, 2019, 4, 13021-13024.	1.5	1
43	Analytical Understanding of the Materials Design with Wellâ€Described Shrinkages on Multiscale. Chemistry - A European Journal, 2018, 24, 6886-6904.	3.3	14
44	Curved Fragmented Graphenic Hierarchical Architectures for Extraordinary Charging Capacities. Small, 2018, 14, e1702054.	10.0	12
45	Improved Graphene-Oxide-Derived Carbon Sponge for Effective Hydrocarbon Absorption and Câ€“C Coupling Reaction. ACS Sustainable Chemistry and Engineering, 2018, 6, 11793-11800.	6.7	5
46	3D network of cellulose-based energy storage devices and related emerging applications. Materials Horizons, 2017, 4, 522-545.	12.2	261
47	Solventless Câ€“C Coupling of Low Carbon Furanics to High Carbon Fuel Precursors Using an Improved Graphene Oxide Carbocatalyst. ACS Catalysis, 2017, 7, 3905-3915.	11.2	72
48	Hydrogenâ€Economic Synthesis of Gasolineâ€like Hydrocarbons by Catalytic Hydrodecarboxylation of the Biomassâ€derived Angelica Lactone Dimer. ChemCatChem, 2017, 9, 2622-2626.	3.7	23
49	Catalytic Hydrodeoxygenation of High Carbon Furylmethanes to Renewable Jetâ€fuel Ranged Alkanes over a Rheniumâ€Modified Iridium Catalyst. ChemSusChem, 2017, 10, 3225-3234.	6.8	54
50	Hydrodeoxygenation of Furylmethane Oxygenates to Jet and Diesel Range Fuels: Probing the Reaction Network with Supported Palladium Catalyst and Hafnium Triflate Promoter. ACS Catalysis, 2017, 7, 5491-5499.	11.2	40
51	Strategies for Improving the Functionality of Zeolitic Imidazolate Frameworks: Tailoring Nanoarchitectures for Functional Applications. Advanced Materials, 2017, 29, 1700213.	21.0	366
52	Catalytic Hydrodeoxygenation of High Carbon Furylmethanes to Renewable Jet-fuel Ranged Alkanes over a Rhenium-Modified Iridium Catalyst. ChemSusChem, 2017, 10, 3164-3164.	6.8	0
53	Î²-Alkyl Elimination: Fundamental Principles and Some Applications. Chemical Reviews, 2016, 116, 8105-8145.	47.7	102
54	Critical design of heterogeneous catalysts for biomass valorization: current thrust and emerging prospects. Catalysis Science and Technology, 2016, 6, 7364-7385.	4.1	111

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55	ZIF-8 Derived, Nitrogen-Doped Porous Electrodes of Carbon Polyhedron Particles for High-Performance Electrosorption of Salt Ions. Scientific Reports, 2016, 6, 28847.	3.3	55
56	An unique approach of applying magnetic nanoparticles attached commercial lipase acrylic resin for biodiesel production. Catalysis Today, 2016, 278, 330-334.	4.4	21
57	Cellulose Framework Directed Construction of Hierarchically Porous Carbons Offering High-Performance Capacitive Deionization of Brackish Water. ACS Sustainable Chemistry and Engineering, 2016, 4, 1885-1893.	6.7	95
58	Production of 5-(chloromethyl)furan-2-carbonyl chloride and furan-2,5-dicarbonyl chloride from biomass-derived 5-(chloromethyl)furfural (CMF). Green Chemistry, 2015, 17, 3737-3739.	9.0	33
59	Upgrading Furfurals to Drop-in Biofuels: An Overview. ACS Sustainable Chemistry and Engineering, 2015, 3, 1263-1277.	6.7	259
60	Mesoporous Europium-Doped Titania Nanoparticles (Eu-MTNs) for Luminescence-Based Intracellular Bio-Imaging. Journal of Nanoscience and Nanotechnology, 2015, 15, 9802-9806.	0.9	5
61	Efficient, metal-free production of succinic acid by oxidation of biomass-derived levulinic acid with hydrogen peroxide. Green Chemistry, 2015, 17, 2335-2338.	9.0	78
62	Efficient, Chemicalâ€Catalytic Approach to the Production of 3â€Hydroxypropanoic Acid by Oxidation of Biomassâ€Derived Levulinic Acid With Hydrogen Peroxide. ChemSusChem, 2015, 8, 1167-1169.	6.8	27
63	Lignin Deconstruction. , 2015, , 125-155.		3
64	Synthesis of Mixed-Ligand Zeolitic Imidazolate Framework (ZIF-8-90) for CO2 Adsorption. Journal of Inorganic and Organometallic Polymers and Materials, 2015, 25, 251-258.	3.7	35
65	Imparting Functionality to Biocatalysts via Embedding Enzymes into Nanoporous Materials by a de Novo Approach: Size-Selective Sheltering of Catalase in Metalâ€“Organic Framework Microcrystals. Journal of the American Chemical Society, 2015, 137, 4276-4279.	13.7	674
66	Predictable Shrinkage during the Precise Design of Porous Materials and Nanomaterials. Chemistry of Materials, 2015, 27, 6918-6928.	6.7	40
67	Synthesis of magnetic mesoporous titania colloidal crystals through evaporation induced self-assembly in emulsion as effective and recyclable photocatalysts. Physical Chemistry Chemical Physics, 2015, 17, 27653-27657.	2.8	20
68	Functionalized Fe₃O₄@Silica Coreâ€“Shell Nanoparticles as Microalgae Harvester and Catalyst for Biodiesel Production. ChemSusChem, 2015, 8, 789-794.	6.8	105
69	Effect of carboxylic acid of periodic mesoporous organosilicas on the fructose-to-5-hydroxymethylfurfural conversion in dimethylsulfoxide systems. APL Materials, 2014, 2, .	5.1	6
70	Carboxylic acid-grafted mesoporous material and its high catalytic activity in one-pot three-component coupling reaction. APL Materials, 2014, 2, 113307.	5.1	5
71	Novel Pathways to 2,5â€Dimethylfuran via Biomassâ€Derived 5â€(Chloromethyl)furfural. ChemSusChem, 2014, 7, 3028-3030.	6.8	46
72	Integrated, Cascading Enzymeâ€/Chemocatalytic Cellulose Conversion using Catalysts based on Mesoporous Silica Nanoparticles. ChemSusChem, 2014, 7, 3241-3246.	6.8	106

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73	Integrated, Cascading Enzymeâ€/Chemocatalytic Cellulose Conversion using Catalysts based on Mesoporous Silica Nanoparticles. ChemSusChem, 2014, 7, 3181-3181.	6.8	4
74	Hydrodeoxygenation of the Angelica Lactone Dimer, a Celluloseâ€Based Feedstock: Simple, Highâ€Yield Synthesis of Branched C₇â€“C₁₀ Gasolineâ€like Hydrocarbons. Angewandte Chemie - International Edition, 2014, 53, 1854-1857.	13.8	179
75	Promises in direct conversion of cellulose and lignocellulosic biomass to chemicals and fuels: Combined solventâ€“nanocatalysis approach for biorefinary. Biomass and Bioenergy, 2014, 62, 182-197.	5.7	73
76	Synthesis of the Insecticide Prothrin and Its Analogues from Biomass-Derived 5-(Chloromethyl)furfural. Journal of Agricultural and Food Chemistry, 2014, 62, 476-480.	5.2	44
77	Co-Crystals of a Salicylideneaniline: Photochromism Involving Planar Dihedral Angles. Chemistry of Materials, 2014, 26, 3042-3044.	6.7	55
78	Chemical-Catalytic Approaches to the Production of Furfurals and Levulinates from Biomass. Topics in Current Chemistry, 2014, 353, 41-83.	4.0	25
79	Emerging strategies for breaking the 3D amorphous network of lignin. Catalysis Science and Technology, 2014, 4, 3785-3799.	4.1	96
80	Hierarchically porous carbon derived from polymers and biomass: effect of interconnected pores on energy applications. Energy and Environmental Science, 2014, 7, 3574-3592.	30.8	1,204
81	Enzymatic breakdown of biomass: enzyme active sites, immobilization, and biofuel production. Green Chemistry, 2014, 16, 4615-4626.	9.0	105
82	Recent Advancements of Replacing Existing Aniline Production Process With Environmentally Friendly One-Pot Process: An Overview. Critical Reviews in Environmental Science and Technology, 2013, 43, 84-120.	12.8	19
83	Continuous Mesoporous Titania Nanocrystals: Their Growth in Confined Space and Scope for Application. ChemSusChem, 2013, 6, 2039-2041.	6.8	5
84	Single-crystal-to-single-crystal direct cross-linking and photopolymerisation of a discrete Ag(<scp>i</scp>) complex to give a 1D polycyclobutane coordination polymer. Chemical Communications, 2013, 49, 1064-1066.	4.1	46
85	Advances in biomass transformation to 5-hydroxymethylfurfural and mechanistic aspects. Biomass and Bioenergy, 2013, 55, 355-369.	5.7	106
86	Catalytic materials that improve selectivity of biomass conversions. RSC Advances, 2012, 2, 12575.	3.6	65
87	Deoxygenation of Biomassâ€Derived Feedstocks: Hurdles and Opportunities. ChemSusChem, 2012, 5, 2125-2127.	6.8	70
88	Self-Assembled TiO₂ Nanospheres By Using a Biopolymer as a Template and Its Optoelectronic Application. ACS Applied Materials & Interfaces, 2012, 4, 1560-1564.	8.0	73
89	Preparation and Characterization of Aluminum Alkoxides Coordinated on salen-Type Ligands: Highly Stereoselective Ring-Opening Polymerization of rac-Lactide. Organometallics, 2012, 31, 2016-2025.	2.3	165
90	Biopolymer templated porous TiO2: An efficient catalyst for the conversion of unutilized sugars derived from hemicellulose. Applied Catalysis A: General, 2012, 435-436, 197-203.	4.3	48

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91	Aerobic oxidation of 5-hydroxylmethylfurfural with homogeneous and nanoparticulate catalysts. Catalysis Science and Technology, 2012, 2, 79-81.	4.1	136
92	Solid-acid and ionic-liquid catalyzed one-pot transformation of biorenewable substrates into a platform chemical and a promising biofuel. RSC Advances, 2012, 2, 6890.	3.6	82
93	Advances in conversion of hemicellulosic biomass to furfural and upgrading to biofuels. Catalysis Science and Technology, 2012, 2, 2025.	4.1	372
94	Hierarchically porous titanium phosphate nanoparticles: an efficient solid acid catalyst for microwave assisted conversion of biomass and carbohydrates into 5-hydroxymethylfurfural. Journal of Materials Chemistry, 2012, 22, 14094.	6.7	93
95	A Brief Summary of the Synthesis of Polyester Buildingâ€Block Chemicals and Biofuels from 5â€Hydroxymethylfurfural. ChemPlusChem, 2012, 77, 259-272.	2.8	150
96	Oneâ€Pot Conversions of Lignocellulosic and Algal Biomass into Liquid Fuels. ChemSusChem, 2012, 5, 1826-1833.	6.8	141
97	Direct conversion of cellulose and lignocellulosic biomass into chemicals and biofuel with metal chloride catalysts. Journal of Catalysis, 2012, 288, 8-15.	6.2	232
98	Synthesis of the natural herbicide Î´-aminolevulinic acid from cellulose-derived 5-(chloromethyl)furfural. Green Chemistry, 2011, 13, 40-41.	9.0	69
99	Microwave assisted conversion of carbohydrates and biopolymers to 5-hydroxymethylfurfural with aluminium chloride catalyst in water. Green Chemistry, 2011, 13, 2859.	9.0	229
100	Resorcinol-Templated Synthesis of a Cofacial Terpyridine in Crystalline Ï€-Stacked Columns. Organic Letters, 2011, 13, 2260-2262.	4.6	24
101	Phosphine supported metal-dihydrogen complexes: Elongation of Hâ‹¯H bond to reversible release of H2. Comptes Rendus Chimie, 2011, 14, 1029-1053.	0.5	11
102	Synthesis of ranitidine (Zantac) from cellulose-derived 5-(chloromethyl)furfural. Green Chemistry, 2011, 13, 3101.	9.0	59
103	Self-assembly of mesoporous TiO2 nanospheres via aspartic acid templating pathway and its catalytic application for 5-hydroxymethyl-furfural synthesis. Journal of Materials Chemistry, 2011, 21, 17505.	6.7	89
104	Microwave assisted rapid conversion of carbohydrates into 5-hydroxymethylfurfural catalyzed by mesoporous TiO2 nanoparticles. Applied Catalysis A: General, 2011, 409-410, 133-139.	4.3	118
105	Recent Developments in Metal-Catalyzed Ring-Opening Polymerization of Lactides and Glycolides: Preparation of Polylactides, Polyglycolide, and Poly(lactide-co-glycolide). Advances in Polymer Science, 2011, , 219-283.	0.8	56
106	Synthesis and Structural Studies of Lithium and Sodium Complexes with OOO-Tridentate Bis(phenolate) Ligands: Effective Catalysts for the Ring-Opening Polymerization of <scp>l</scp>-Lactide. Inorganic Chemistry, 2010, 49, 9416-9425.	4.0	74
107	Ring-opening polymerization by lithium catalysts: an overview. Chemical Society Reviews, 2010, 39, 1724-1746.	38.1	199
108	Influence of the Electronics of the Phosphine Ligands on the Hâ‹¯H Bond Elongation in Dihydrogen Complexes. Inorganic Chemistry, 2008, 47, 548-557.	4.0	17

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109	16-Electron Elongated Dihydrogen Complex Stabilized by Agostic Interaction. Inorganic Chemistry, 2006, 45, 7047-7049.	4.0	7
110	Snapshots of the â€œbreakingâ€•of the H-H bond in the oxidative addition of H2 to a metal centre. Journal of Chemical Sciences, 2006, 118, 579-582.	1.5	1
111	Dynamics of acis-Dihydrogen/Hydride Complex of Iridium. Inorganic Chemistry, 2005, 44, 6203-6210.	4.0	23
112	Upgrading of coconut shell-derived pyrolytic bio-oil by thermal and catalytic deoxygenation. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 0, , 1-10.	2.3	1