Avtar Matharu

List of Publications by Year
in descending order

96 papers	2,931 citations	136740 32 h-index	189595 50 g-index
99 all docs	99 docs citations	99 times ranked	3792 citing authors

#	Article	IF	Citations
1	Tuning the selectivity of natural oils and fatty acids/esters deoxygenation to biofuels and fatty alcohols: A review. Green Energy and Environment, 2023, 8, 722-743.	4.7	14
2	Decolonizing the Undergraduate Chemistry Curriculum: An Account of How to Start. Journal of Chemical Education, 2022, 99, 5-9.	1.1	13
3	What Makes a Professional Chemist? Embedding Equality, Diversity, and Inclusion into Chemistry Skills Training for Undergraduates. Journal of Chemical Education, 2022, 99, 480-486.	1.1	6
4	Biologically bound nickel as a sustainable catalyst for the selective hydrogenation of cinnamaldehyde. Applied Catalysis B: Environmental, 2022, 306, 121105.	10.8	17
5	Recent Advances in Green Synthesis of Ag NPs for Extenuating Antimicrobial Resistance. Nanomaterials, 2022, 12, 1115.	1.9	42
6	Silver nanostructures prepared via novel green approach as an effective platform for biological and environmental applications. Saudi Journal of Biological Sciences, 2022, 29, 103296.	1.8	31
7	Highly Efficient Mesoporous Carbonaceous CeO₂ Catalyst for Dephosphorylation. ACS Omega, 2022, 7, 22551-22558.	1.6	2
8	Use of Carbotrace 480 as a Probe for Cellulose and Hydrogel Formation from Defibrillated Microalgae. Gels, 2022, 8, 383.	2.1	2
9	Mesoporous-rich calcium and potassium-activated carbons prepared from degreased spent coffee grounds for efficient removal of MnO₄^{2â^’} in aqueous media. RSC Advances, 2022, 12, 19417-19423.	1.7	3
10	A biorefinery strategy for spent industrial ginger waste. Journal of Hazardous Materials, 2021, 401, 123400.	6.5	23
11	Analysis and optimisation of a novel â€˜almond-refineryâ€™ concept: Simultaneous production of biofuels and value-added chemicals by hydrothermal treatment of almond hulls. Science of the Total Environment, 2021, 765, 142671.	3.9	10
12	Recycling bread waste into chemical building blocks using a circular biorefining approach. Sustainable Energy and Fuels, 2021, 5, 4842-4849.	2.5	45
13	From unavoidable food waste to advanced biomaterials: microfibrilated lignocellulose production by microwave-assisted hydrothermal treatment of cassava peel and almond hull. Cellulose, 2021, 28, 7687-7705.	2.4	14
14	Microwave-Assisted Defibrillation of Microalgae. Molecules, 2021, 26, 4972.	1.7	5
15	Efficacy and sustainability of natural products in COVID-19 treatment development: opportunities and challenges in using agro-industrial waste from Citrus and apple. Heliyon, 2021, 7, e07816.	1.4	11
16	Recent advances made in the synthesis of small drug molecules for clinical applications: An insight. Current Research in Green and Sustainable Chemistry, 2021, 4, 100097.	2.9	14
17	Phytocat â€“ a bio-derived Ni catalyst for rapid de-polymerization of polystyrene using a synergistic approach. Green Chemistry, 2021, 23, 808-814.	4.6	11
18	Microwave-assisted hydrothermal treatments for biomass valorisation: a critical review. Green Chemistry, 2021, 23, 3502-3525.	4.6	70

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19	Microwave-Assisted Hydrothermal Valorisation of Rapeseed Meal for the Co-Production of High Purity Lignin and Saccharide-Rich Aqueous Solutions. Innovative Renewable Energy, 2020, , 747-759.	0.2	0
20	Hybridised sustainability metrics for use in life cycle assessment of bio-based products: resource efficiency and circularity. Green Chemistry, 2020, 22, 803-813.	4.6	45
21	Highly stable AgNPs prepared via a novel green approach for catalytic and photocatalytic removal of biological and non-biological pollutants. Environment International, 2020, 143, 105924.	4.8	108
22	A New Step Forward Nonseasonal 5G Biorefineries: Microwave-Assisted, Synergistic, Co-Depolymerization of Wheat Straw (2G Biomass) and <i>Laminaria saccharina</i> (3G Biomass). ACS Sustainable Chemistry and Engineering, 2020, 8, 12493-12510.	3.2	12
23	Unforeseen crystal forms of the natural osmolyte floridoside. Communications Chemistry, 2020, 3, .	2.0	0
24	Toward Novel Biocomposites from Unavoidable Food Supply Chain Wastes and Zirconia. ACS Sustainable Chemistry and Engineering, 2020, 8, 14039-14046.	3.2	3
25	Antimicrobial activity of a silver-microfibrillated cellulose biocomposite against susceptible and resistant bacteria. Scientific Reports, 2020, 10, 7281.	1.6	41
26	Deep Eutectic Solvents Based on Natural Ascorbic Acid Analogues and Choline Chloride. ChemistryOpen, 2020, 9, 559-567.	0.9	13
27	Perspectives on â€œGame Changerâ€•Global Challenges for Sustainable 21st Century: Plant-Based Diet, Unavoidable Food Waste Biorefining, and Circular Economy. Sustainability, 2020, 12, 1976.	1.6	67
28	A novel molybdenum oxideâ€"Starbon catalyst for wastewater remediation. Journal of Materials Chemistry A, 2020, 8, 14519-14527.	5.2	19
29	The role of surface functionality of sustainable mesoporous materials StarbonÂ® on the adsorption of toxic ammonia and sulphur gasses. Sustainable Chemistry and Pharmacy, 2020, 15, 100230.	1.6	11
30	Global occurrence, chemical properties, and ecological impacts of e-wastes (IUPAC Technical Report). Pure and Applied Chemistry, 2020, 92, 1733-1767.	0.9	42
31	Fermentable Liquid Energy Carriers by Microwave-Assisted Hydrothermal Depolymerisation of Several Biomass Carbohydrates. Innovative Renewable Energy, 2020, , 909-920.	0.2	1
32	Spent Mango Cellulose-Supported <i>N</i>-Heterocyclic Carbene-Iron(III) Catalyst for Fructose to HMF Dehydration. ACS Sustainable Chemistry and Engineering, 2019, 7, 14899-14905.	3.2	7
33	Superior Mesoporosity of Lipidâ€Free Spent Coffee Ground Residues. ChemSusChem, 2019, 12, 4074-4081.	3.6	3
34	Toward Renewable-Based, Food-Applicable Prebiotics from Biomass: A One-Step, Additive-Free, Microwave-Assisted Hydrothermal Process for the Production of High Purity Xylo-oligosaccharides from Beech Wood Hemicellulose. ACS Sustainable Chemistry and Engineering, 2019, 7, 16160-16172.	3.2	25
35	Defibrillated Celluloses via Dual Twin-Screw Extrusion and Microwave Hydrothermal Treatment of Spent Pea Biomass. ACS Sustainable Chemistry and Engineering, 2019, 7, 11861-11871.	3.2	17
36	Valorization of Waste Orange Peel to Produce Shear-Thinning Gels. Journal of Chemical Education, 2019, 96, 3025-3029.	1.1	27

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37	Life-Cycle Assessment of Microwave-Assisted Pectin Extraction at Pilot Scale. ACS Sustainable Chemistry and Engineering, 2019, 7, 5167-5175.	3.2	46
38	Simultaneous production of lignin and polysaccharide rich aqueous solutions by microwave-assisted hydrothermal treatment of rapeseed meal. Energy Conversion and Management, 2018, 165, 634-648.	4.4	24
39	Processing of Citrus Nanostructured Cellulose: A Rigorous Designâ€ofâ€Experiment Study of the Hydrothermal Microwaveâ€Assisted Selective Scissoring Process. ChemSusChem, 2018, 11, 1344-1353.	3.6	28
40	Starbon/Highâ€Amylose Corn Starchâ€Supported Nâ€Heterocyclic Carbeneâ€"Iron(III) Catalyst for Conversion of Fructose into 5â€Hydroxymethylfurfural. ChemSusChem, 2018, 11, 716-725.	3.6	23
41	Unexpected nitrile formation in bio-based mesoporous materials (StarbonsÂ®). Chemical Communications, 2018, 54, 686-688.	2.2	5
42	Kinetic and Desorption Study of Selected Bioactive Compounds on Mesoporous Starbons: A Comparison with Microporous-Activated Carbon. ACS Omega, 2018, 3, 18361-18369.	1.6	10
43	Enhanced Protein Extraction from Oilseed Cakes Using Glycerolâ€"Choline Chloride Deep Eutectic Solvents: A Biorefinery Approach. ACS Sustainable Chemistry and Engineering, 2018, 6, 15791-15800.	3.2	72
44	Production of fermentable species by microwave-assisted hydrothermal treatment of biomass carbohydrates: reactivity and fermentability assessments. Green Chemistry, 2018, 20, 4507-4520.	4.6	29
45	Synthesis and Characterization of Bacterial Cellulose from Citrus-Based Sustainable Resources. ACS Omega, 2018, 3, 10365-10373.	1.6	58
46	Food Supply Chain Waste: A Functional Periodic Table of Bio-Based Resources. , 2018, , 219-236.		2
47	Toward a Zero-Waste Biorefinery: Confocal Microscopy as a Tool for the Analysis of Lignocellulosic Biomass. ACS Sustainable Chemistry and Engineering, 2018, 6, 13185-13191.	3.2	5
48	Using Greener Gels To Explore Rheology. Journal of Chemical Education, 2017, 94, 500-504.	1.1	17
49	Unavoidable food supply chain waste: acid-free pectin extraction from mango peel via subcritical water. Faraday Discussions, 2017, 202, 31-42.	1.6	22
50	Valorisation of Biowastes for the Production of Green Materials Using Chemical Methods. Topics in Current Chemistry, 2017, 375, 46.	3.0	44
51	Water activity in liquid food systems: A molecular scale interpretation. Food Chemistry, 2017, 237, 1133-1138.	4.2	21
52	Feedstocks and analysis: general discussion. Faraday Discussions, 2017, 202, 497-519.	1.6	2
53	Bio-based materials: general discussion. Faraday Discussions, 2017, 202, 121-139.	1.6	3
54	Bio-based chemicals: general discussion. Faraday Discussions, 2017, 202, 227-245.	1.6	0

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55	Conversion technologies: general discussion. Faraday Discussions, 2017, 202, 371-389.	1.6	0
56	The Hy-MASS concept: hydrothermal microwave assisted selective scissoring of cellulose for in situ production of (meso)porous nanocellulose fibrils and crystals. Green Chemistry, 2017, 19, 3408-3417.	4.6	58
57	Monitoring the Crystalline Structure of Sugar Cane Bagasse in Aqueous Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2017, 5, 7278-7283.	3.2	17
58	In celebration of the 65th birthday of Professor James Clark. Green Chemistry, 2016, 18, 3469-3470.	4.6	0
59	Potential Utilization of Unavoidable Food Supply Chain Wastesâ€"Valorization of Pea Vine Wastes. ACS Sustainable Chemistry and Engineering, 2016, 4, 6002-6009.	3.2	24
60	Acid-free microwave-assisted hydrothermal extraction of pectin and porous cellulose from mango peel waste â€" towards a zero waste mango biorefinery. Green Chemistry, 2016, 18, 5280-5287.	4.6	64
61	Opportunity for high value-added chemicals from food supply chain wastes. Bioresource Technology, 2016, 215, 123-130.	4.8	145
62	New insights into the curing of epoxidized linseed oil with dicarboxylic acids. Green Chemistry, 2015, 17, 4000-4008.	4.6	106
63	The importance of elemental sustainability and critical element recovery. Green Chemistry, 2015, 17, 1949-1950.	4.6	55
64	Low-temperature microwave-assisted pyrolysis of waste office paper and the application of bio-oil as an Al adhesive. Green Chemistry, 2015, 17, 260-270.	4.6	65
65	Applications of nanoparticles in biomass conversion to chemicals and fuels. Green Chemistry, 2014, 16, 573-584.	4.6	96
66	Chemical modification of starch and the application of expanded starch and its esters in hot melt adhesive. RSC Advances, 2014, 4, 41947-41955.	1.7	37
67	Current and future trends in food waste valorization for the production of chemicals, materials and fuels: a global perspective. Biofuels, Bioproducts and Biorefining, 2014, 8, 686-715.	1.9	148
68	From mushroom alcohol to liquid crystals: a useful platform molecule. Liquid Crystals, 2014, 41, 1388-1393.	0.9	2
69	Bio-based thermoset composites from epoxidised linseed oil and expanded starch. RSC Advances, 2014, 4, 23304-23313.	1.7	32
70	Azo containing thiophene based prop-2-enoates for photoalignment of a nematic liquid crystal. Journal of Materials Chemistry C, 2013, 1, 3600.	2.7	27
71	From waste to wealth using green chemistry. Pure and Applied Chemistry, 2013, 85, 1625-1631.	0.9	38
72	Thermosetting resin based on epoxidised linseed oil and bio-derived crosslinker. Green Chemistry, 2012, 14, 1759.	4.6	107

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73	The significance of D-amino acids in soil, fate and utilization by microbes and plants: review and identification of knowledge gaps. Plant and Soil, 2012, 354, 21-39.	1.8	96
74	The chemical value of wheat straw combustion residues. RSC Advances, 2011, 1, 523.	1.7	28
75	Exploring the mesomorphic potential of 2,4-disubstituted thiophenes: a structureâ€“property study. Liquid Crystals, 2011, 38, 207-232.	0.9	10
76	Expanding the potential for waste polyvinyl-alcohol. Green Chemistry, 2009, 11, 1332.	4.6	16
77	Holographic recording in thiophene-based polyester. Journal of Materials Chemistry, 2008, 18, 3011.	6.7	6
78	Structureâ€“property investigation of 2â€•and 3â€•thienylacrylates bearing laterally fluorinated azobenzene moieties. Liquid Crystals, 2007, 34, 1317-1336.	0.9	33
79	Synthesis and optical storage properties of a thiophene-based holographic recording medium. Journal of Materials Chemistry, 2007, 17, 4477.	6.7	29
80	Liquid crystals for holographic optical data storage. Chemical Society Reviews, 2007, 36, 1868.	18.7	217
81	Laterally fluorinated liquid crystals containing the 2,2â€²â€•bithiophene moiety. Liquid Crystals, 2007, 34, 489-506.	0.9	47
82	Electrically commanded surfaces for nematic liquid crystal displays. Applied Physics Letters, 2005, 86, 023502.	1.5	41
83	Optic, electrooptic and dielectric properties of novel antiferroelectric liquid crystal compounds. Ferroelectrics, 2000, 244, 147-157.	0.3	7
84	Ferro-, ferri- and antiferro-electric behaviour in a bent-shaped mesogen. Journal of Materials Chemistry, 2000, 10, 1303-1310.	6.7	39
85	Novel Bi- and Ter-Thiophenes Exhibiting Ferri- and Antiferro-Electric Behaviour. Molecular Crystals and Liquid Crystals, 1999, 332, 303-311.	0.3	12
86	The synthesis and characterisation of a novel thiophene-based liquid crystal exhibiting ferro-, ferri- and antiferro-electric phase types. Journal of Materials Chemistry, 1996, 6, 1871.	6.7	38
87	The Synthesis and Liquid Crystal Properties of certain 4â€²-Alkoxy-2,2â€²,3,3â€²,5,5â€²,6,6â€²-octafluorobiphenyl-4-yl-trans-4-alkylcyclohexane-1-carboxylates. Molecular Crystals and Liquid Crystals, 1995, 258, 95-105.	0.3	5
88	Properties of the liquid crystals formed by certain 4â€²-n-alkylbiphenyl-4-yl 5-n-alkylthiophene-2-carboxylates. Liquid Crystals, 1995, 19, 387-396.	0.9	17
89	The synthesis and liquid crystal properties of certain 1-(4â€²-<i>n</i>-alkoxy-2,2â€²,3,3â€²,5,5â€²,6,6â€²-octafluorobiphenyl-4-yl)-2-(<i>trans</i>-4-<i>n</i>-pentylcyclohexyl)-ethanes and -ethenes. Liquid Crystals, 1995, 19, 39-45.	0.9	6
90	The Synthesis and Liquid Crystal Properties of Certain 5,5â€³-Disubstituted 2,2â€²:5â€²,2â€³-Terthienyls. Molecular Crystals and Liquid Crystals, 1995, 264, 227-230.	0.3	4

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91	Properties of the Liquid Crystals Formed by Certain Azomethines Containing Terminal Cycloalkyl Ring Systems. Molecular Crystals and Liquid Crystals, 1995, 258, 217-228.	0.3	4
92	The Synthesis and Liquid Crystal Properties of Certain 5,5â€³-Disubstituted 2,2â€²:5â€²,2â€³-Terthiophenes. Molecular Crystals and Liquid Crystals, 1995, 265, 61-76.	0.3	38
93	X-ray diffraction studies of the liquid crystal phases of certain 4-<i>n</i>-alkoxyphenyl 4-(5-<i>n</i>-alkyl-2-thienyl)benzoates. Liquid Crystals, 1995, 19, 693-698.	0.9	9
94	Synthesis of Certain Mesogenic Azomethines Derived from 4-Cycloalkylanilines and from 4-Cycloalkylbenzaldehydes. Molecular Crystals and Liquid Crystals, 1995, 258, 229-237.	0.3	2
95	A study of homologation and the occurrence of an S_A-S_C-S_Asequence of phases in the 4-<i>n</i>-alkoxy-3-fluorophenyl 4-(5-<i>n</i>-alkyl-2-thienyl)benzoates. Liquid Crystals, 1993, 14, 645-652.	0.9	11
96	Photochromic Polymers for Optical Data Storage: Azobenzenes and Photodimers. , 0, , 209-234.		4