Rahul R Bhosale

List of Publications by Citations

116 papers	2,233 citations	30 h-index	43 g-index
121 ext. papers	2,756 ext. citations	6.1 avg, IF	6.17 L-index

#	Paper	IF	Citations
116	Heavy metal ions removal from industrial wastewater using magnetic nanoparticles (MNP). *Applied Surface Science*, **2020**, 506, 144924	6.7	94
115	Thermodynamic analysis of solar driven SnO2/SnO based thermochemical water splitting cycle. *Energy Conversion and Management*, **2017**, 135, 226-235	10.6	82
114	Thermochemical water-splitting for H2 generation using sol-gel derived Mn-ferrite in a packed bed reactor. *International Journal of Hydrogen Energy*, **2012**, 37, 2924-2934	6.7	82
113	Combustion synthesis of bifunctional LaMO3 (M = Cr, Mn, Fe, Co, Ni) perovskites for oxygen reduction and oxygen evolution reaction in alkaline media. *Journal of Electroanalytical Chemistry*, **2018**, 809, 22-30	4.1	76
112	A decade of ceria based solar thermochemical H2O/CO2 splitting cycle. *International Journal of Hydrogen Energy*, **2019**, 44, 34-60	6.7	76
111	Impact of CO concentration and ambient conditions on microalgal growth and nutrient removal from wastewater by a photobioreactor. *Science of the Total Environment*, **2019**, 662, 662-671	10.2	72
110	Solar hydrogen production via thermochemical iron oxide–iron sulfate water splitting cycle. *International Journal of Hydrogen Energy*, **2015**, 40, 1639-1650	6.7	70
109	Review on sustainable production of biochar through hydrothermal liquefaction: Physico-chemical properties and applications. *Bioresource Technology*, **2020**, 310, 123414	11	56
108	Removal of emerging pharmaceuticals from wastewater by ozone-based advanced oxidation processes. *Environmental Progress and Sustainable Energy*, **2016**, 35, 982-995	2.5	55
107	Solar Hydrogen Production via a Samarium Oxide-Based Thermochemical Water Splitting Cycle. *Energies*, **2016**, 9, 316	3.1	52
106	Cellulose assisted combustion synthesis of porous Cu–Ni nanopowders. *RSC Advances*, **2015**, 5, 28703-28712	3.12	51
105	A review on the conversion of volatile fatty acids to polyhydroxyalkanoates using dark fermentative effluents from hydrogen production. *Bioresource Technology*, **2019**, 287, 121427	11	50
104	Solar thermochemical ZnO/ZnSO4 water splitting cycle for hydrogen production. *International Journal of Hydrogen Energy*, **2017**, 42, 23474-23483	6.7	49
103	Assessment of Ce Zr Hf O2 based oxides as potential solar thermochemical CO2 splitting materials. *Ceramics International*, **2016**, 42, 9354-9362	5.1	47
102	A comparative thermodynamic analysis of samarium and erbium oxide based solar thermochemical water splitting cycles. *International Journal of Hydrogen Energy*, **2017**, 42, 23416-23426	6.7	47
101	Intergraded wastewater treatment and carbon bio-fixation from flue gases using Spirulina platensis and mixed algal culture. *Chemical Engineering Research and Design*, **2019**, 124, 240-250	5.5	46
100	Thermodynamic efficiency analysis of zinc oxide based solar driven thermochemical H2O splitting cycle: Effect of partial pressure of O2, thermal reduction and H2O splitting temperatures. *International Journal of Hydrogen Energy*, **2018**, 43, 14915-14924	6.7	43

99	Solar hydrogen production via erbium oxide based thermochemical water splitting cycle. *Journal of Renewable and Sustainable Energy*, **2016**, 8, 034702	2.5	42
98	Study of ethanol dehydrogenation reaction mechanism for hydrogen production on combustion synthesized cobalt catalyst. *International Journal of Hydrogen Energy*, **2017**, 42, 23464-23473	6.7	41
97	In situ DRIFTS Studies on Cu, Ni and CuNi catalysts for Ethanol Decomposition Reaction. *Catalysis Letters*, **2016**, 146, 778-787	2.8	40
96	Bio-carrier and operating temperature effect on ammonia removal from secondary wastewater effluents using moving bed biofilm reactor (MBBR). *Science of the Total Environment*, **2019**, 693, 133425	10.2	40
95	Solar Thermochemical Hydrogen Production via Terbium Oxide Based Redox Reactions. *International Journal of Photoenergy*, **2016**, 2016, 1-9	2.1	40
94	Effectiveness of Ni incorporation in iron oxide crystal structure towards thermochemical CO2 splitting reaction. *Ceramics International*, **2017**, 43, 5150-5155	5.1	39
93	Sol□gel derived CeO2□e2O3 nanoparticles: Synthesis, characterization and solar thermochemical application. *Ceramics International*, **2016**, 42, 6728-6737	5.1	37
92	Cobalt oxide nanopowder synthesis using cellulose assisted combustion technique. *Ceramics International*, **2016**, 42, 12771-12777	5.1	37
91	Electrochemical oxidation of ammonia on nickel oxide nanoparticles. *International Journal of Hydrogen Energy*, **2020**, 45, 10398-10408	6.7	35
90	Catalytic hydrothermal liquefaction of biomass into bio-oils and other value-added products □A review. *Fuel*, **2021**, 285, 119053	7.1	35
89	Enhancing the production of biogas through anaerobic co-digestion of agricultural waste and chemical pre-treatments. *Chemosphere*, **2020**, 255, 126805	8.4	33
88	Industrial wastewater to biohydrogen: Possibilities towards successful biorefinery route. *Bioresource Technology*, **2020**, 298, 122378	11	33
87	H2 generation from two-step thermochemical water-splitting reaction using sol-gel derived SnxFeyOz. *Journal of Renewable and Sustainable Energy*, **2011**, 3, 063104	2.5	30
86	Solar co-production of samarium and syngas via methanothermal reduction of samarium sesquioxide. *Energy Conversion and Management*, **2016**, 112, 413-422	10.6	28
85	Propylene oxide assisted sol□gel synthesis of zinc ferrite nanoparticles for solar fuel production. *Ceramics International*, **2016**, 42, 2431-2438	5.1	28
84	Potential use of solar photocatalytic oxidation in removing emerging pharmaceuticals from wastewater: A pilot plant study. *Solar Energy*, **2018**, 172, 128-140	6.8	28
83	CO2Capture Using Aqueous Potassium Carbonate Promoted by Ethylaminoethanol: A Kinetic Study. *Industrial & Engineering Chemistry Research*, **2016**, 55, 5238-5246	3.9	28
82	A review on valorization of spent coffee grounds (SCG) towards biopolymers and biocatalysts production. *Bioresource Technology*, **2020**, 314, 123800	11	27

81	Kinetics of Absorption of Carbon Dioxide in Aqueous Solution of Ethylaminoethanol Modified with N-methyl-2-pyrolidone. *Separation Science and Technology*, **2013**, 48, 2324-2337	2.5	27
80	Sol-Gel Derived NiFe2O4 Modified with ZrO2 for Hydrogen Generation from Solar Thermochemical Water-Splitting Reaction. *Materials Research Society Symposia Proceedings*, **2012**, 1387, 1		27
79	Influence of fuel ratio on the performance of combustion synthesized bifunctional cobalt oxide catalysts for fuel cell application. *International Journal of Hydrogen Energy*, **2019**, 44, 436-445	6.7	27
78	Influence of draw solution type and properties on the performance of forward osmosis process: Energy consumption and sustainable water reuse. *Chemosphere*, **2019**, 233, 234-244	8.4	23
77	Combustion synthesized A0.5Sr0.5MnO3-δperovskites (where, A = La, Nd, Sm, Gd, Tb, Pr, Dy, and Y) as redox materials for thermochemical splitting of CO2. *Applied Surface Science*, **2019**, 489, 80-91	6.7	21
76	Photocatalytic conversion of CO2 and H2O to useful fuels by nanostructured composite catalysis. *Applied Surface Science*, **2019**, 483, 363-372	6.7	21
75	Bio-sorption of toxic metals from industrial wastewater by algae strains Spirulina platensis and Chlorella vulgaris: Application of isotherm, kinetic models and process optimization. *Science of the Total Environment*, **2021**, 755, 142654	10.2	21
74	Harvesting of intact microalgae in single and sequential conditioning steps by chemical and biological based - flocculants: Effect on harvesting efficiency, water recovery and algal cell morphology. *Bioresource Technology*, **2019**, 281, 250-259	11	20
73	La-Based Perovskites as Oxygen-Exchange Redox Materials for Solar Syngas Production. *MRS Advances*, **2017**, 2, 3365-3370	0.7	19
72	Kinetics of thermal degradation of renewably prepared amines useful for flue gas treatment. *Journal of Renewable and Sustainable Energy*, **2013**, 5, 063110	2.5	19
71	Various potential techniques to reduce the water footprint of microalgal biomass production for biofuel-A review. *Science of the Total Environment*, **2020**, 749, 142218	10.2	19
70	Solar thermocatalytic conversion of CO2 using PrxSr(1−x)MnO3−δperovskites. *Fuel*, **2019**, 254, 115624	7.1	18
69	Sol-Gel Synthesis of Nanocrystalline Ni-Ferrite and Co-Ferrite Redox Materials for Thermochemical Production of Solar Fuels. *Materials Research Society Symposia Proceedings*, **2014**, 1675, 203-208		18
68	Thermodynamic analysis of EMISE/Water as a working pair for absorption refrigeration system. *Applied Thermal Engineering*, **2019**, 148, 787-795	5.8	18
67	Thermodynamic analysis of Ni-ferrite based solar thermochemical H2O splitting cycle for H2 production. *International Journal of Hydrogen Energy*, **2019**, 44, 61-71	6.7	16
66	Thermocatalytic splitting of CO2 using sol-gel synthesized Co-ferrite redox materials. *Fuel*, **2019**, 257, 115965	7.1	13
65	Cost effective biomethanation via surfactant coupled ultrasonic liquefaction of mixed microalgal biomass harvested from open raceway pond. *Bioresource Technology*, **2020**, 304, 123021	11	13
64	Thermodynamic investigation of hydrogen enrichment and carbon suppression using chemical additives in ethanol dry reforming. *International Journal of Hydrogen Energy*, **2016**, 41, 15149-15157	6.7	12

63	Solar oxidation of toluene over Co doped nano-catalyst. *Chemosphere*, **2020**, 255, 126878	8.4	11
62	Mineralization of dichloromethane using solar-oxidation and activated TiO2: Pilot scale study. *Solar Energy*, **2018**, 172, 116-127	6.8	11
61	Advanced wastewater treatment using microalgae: effect of temperature on removal of nutrients and organic carbon. *IOP Conference Series: Earth and Environmental Science*, **2017**, 67, 012032	0.3	10
60	Treatment of waste gas contaminated with dichloromethane using photocatalytic oxidation, biodegradation and their combinations. *Journal of Hazardous Materials*, **2021**, 405, 123735	12.8	10
59	Sol-gel synthesized NixFe3□O4 for thermochemical conversion of CO2. *Applied Surface Science*, **2019**, 489, 693-700	6.7	9
58	Solar hydrogen production via thermochemical magnesium oxide □Magnesium sulfate water splitting cycle. *Fuel*, **2020**, 275, 117892	7.1	9
57	Nitrogen-fixing cyanobacteria as a potential resource for efficient biodiesel production. *Fuel*, **2020**, 279, 118440	7.1	9
56	Application of cobalt incorporated Iron oxide catalytic nanoparticles for thermochemical conversion of CO2. *Applied Surface Science*, **2019**, 495, 143508	6.7	9
55	A novel three-step GeO2/GeO thermochemical water splitting cycle for solar hydrogen production. *International Journal of Hydrogen Energy*, **2020**, 45, 5816-5828	6.7	9
54	Thermochemical splitting of CO2 using Co-precipitation synthesized Ce0.75Zr0.2M0.05O2-□ (M = Cr, Mn, Fe, CO, Ni, Zn) materials. *Fuel*, **2019**, 256, 115834	7.1	8
53	Synthesis and characterization of nanocrystalline CoFe2O4-zirconia via propylene oxide aided sol-gel method. *Ceramics International*, **2018**, 44, 8679-8683	5.1	7
52	Thermochemical H2 production via solar driven hybrid SrO/SrSO4 water splitting cycle. *International Journal of Hydrogen Energy*, **2019**, 44, 118-127	6.7	7
51	Thermodynamic efficiency analysis of ZnO/Zn based solar thermochemical CH4 reforming and H2O splitting cycle. *International Journal of Hydrogen Energy*, **2020**, 45, 5760-5771	6.7	7
50	Hydrogen production via solar driven thermochemical cerium oxide □erium sulfate water splitting cycle. *International Journal of Hydrogen Energy*, **2020**, 45, 10381-10390	6.7	7
49	Application of Li-, Mg-, Ba-, Sr-, Ca-, and Sn-doped ceria for solar-driven thermochemical conversion of carbon dioxide. *Journal of Materials Science*, **2020**, 55, 11797-11807	4.3	6
48	Thermochemical CO2 splitting using a sol-gel□ynthesized Mg-ferrite□based redox system. *International Journal of Energy Research*, **2019**, 43, 6983	4.5	6
47	Concentrated solar power driven water splitting cycle using Zn-ferrite based thermochemical redox reactions. *International Journal of Hydrogen Energy*, **2020**, 45, 10342-10352	6.7	6
46	Thermodynamic analysis of solar-driven chemical looping steam methane reforming over Cr2O3/Cr redox pair. *International Journal of Hydrogen Energy*, **2020**, 45, 10370-10380	6.7	6

45	Solar photo-catalytic production of hydrogen by irradiation of cobalt co-doped TiO2. *International Journal of Hydrogen Energy*, **2021**, 46, 12068-12081	6.7	5
44	Mathematical modeling, simulation and optimization of solar thermal powered Encontech engine for desalination. *Solar Energy*, **2018**, 172, 104-115	6.8	4
43	Solar hydrogen production via ZnO/Zn based thermochemical water splitting cycle: Effect of partial reduction of ZnO. *International Journal of Hydrogen Energy*, **2021**, 46, 4739-4748	6.7	4
42	Thermochemical splitting of CO2 using solution combustion synthesized lanthanum□trontium□anganese perovskites. *Fuel*, **2021**, 285, 119154	7.1	4
41	Investigation of Zr-doped ceria for solar thermochemical valorization of CO2. *International Journal of Energy Research*, **2020**, 44, 12284-12294	4.5	3
40	Terbium oxide-based solar thermochemical CO2 splitting cycle: A thermodynamic investigation **2020**, 10, 703-714		3
39	Ni incorporation in MgFe2O4 for improved CO2-splitting activity during solar fuel production. *Journal of Materials Science*, **2020**, 55, 11086-11094	4.3	3
38	Co-precipitation synthesized nanostructured Ce0.9Ln0.05Ag0.05O2□materials for solar thermochemical conversion of CO2 into fuels. *Journal of Materials Science*, **2020**, 55, 9748-9761	4.3	3
37	Thermodynamic exergy analysis of dysprosium oxide-based solar thermochemical water-splitting cycle. *International Journal of Exergy*, **2017**, 23, 226	1.2	3
36	CO2 Capture Using an Aqueous Formulated Solvent Containing Ethylaminoethanol, N-Methyl-2-Pyrolidone, and Hydroxyl Radical Scavengers: Study of Solvent Degradation and Absorption Kinetics **2015**, 11-19		3
35	Nickel/Cobalt nanoparticles for electrochemical production of hydrogen. *International Journal of Hydrogen Energy*, **2021**, 46, 11369-11377	6.7	3
34	Kinetics of reactive absorption of CO2 using aqueous blend of potassium carbonate, ethylaminoethanol, and N-methyl-2-Pyrollidone (APCEN solvent). *Journal of the Taiwan Institute of Chemical Engineers*, **2018**, 89, 191-197	5.3	3
33	Evaluation of redox performance of silver and transition metal-doped ternary ceria oxides for thermochemical splitting of CO2. *International Journal of Energy Research*, **2019**, 43, 3616-3627	4.5	2
32	Application of chromium oxide-based redox reactions for hydrogen production via solar thermochemical splitting of water. *Fuel*, **2020**, 277, 118160	7.1	2
31	Solar thermochemical conversion of CO2 via erbium oxide based redox cycle **2020**, 10, 865-874		2
30	Solar driven two-step CH4 reforming and H2O splitting using Al2O3 for Co-production of Al, syngas, and H2. *Solar Energy*, **2018**, 172, 232-241	6.8	2
29	Thermochemical splitting of CO2 using solution combustion synthesized LaMO3 (where, M□=□Co, Fe, Mn, Ni, Al, Cr, Sr). *Applied Surface Science*, **2020**, 509, 144908	6.7	2
28	Solar thermochemical H2 production via MnSO4/MnO water splitting cycle: Thermodynamic equilibrium and efficiency analysis. *International Journal of Hydrogen Energy*, **2020**, 45, 10324-10333	6.7	2

27	Mn-ferrite based solar thermochemical water splitting cycle: A thermodynamic evaluation. *Fuel*, **2019**, 256, 115847	7.1	1
26	Thermochemical Conversion of CO2 into Solar Fuels Using Ferrite Nanomaterials **2015**, 141-148		1
25	Thermodynamic Analysis of Solar Fuel Production via Thermochemical H2O and/or CO2 Splitting Using Tin Oxide Based Redox Reactions **2015**, 39-48		1
24	Delivery of Immunomodulatory Microparticles in a Murine Model of Rotator Cuff Tear. *MRS Advances*, **2018**, 3, 1341-1346	0.7	1
23	Solar Fuel Production via Non-Stoichiometric CexZryHfzO2-□Based Two-Step Thermochemical Redox Cycle **2015**, 117-124		1
22	Evacuated tube heat pipe solar collector for Encontech engine-driven reverse osmosis solar desalination. *International Journal of Energy Research*, **2020**, 44, 12460-12473	4.5	1
21	Experimental measurements and modelling of viscosity and density of calcium and potassium chlorides ternary solutions. *Scientific Reports*, **2020**, 10, 16312	4.9	1
20	Energetic and exergetic performance of NH3-H2O-based absorption refrigeration cycle: effect of operating factor. *International Journal of Exergy*, **2020**, 31, 352	1.2	1
19	Solar driven CdSO4/CdO thermochemical water splitting cycle for hydrogen generation. *International Journal of Hydrogen Energy*, **2020**, 45, 5829-5839	6.7	1
18	Hydrogen production via thermochemical H2O splitting using CaSO4 □CaO redox reactions. *International Journal of Hydrogen Energy*, **2020**, 45, 3444-3456	6.7	1
17	Solar assisted methanothermal reduction of barium oxide for the co-production of barium and syngas. *International Journal of Energy Research*, **2021**, 45, 8168-8179	4.5	1
16	Application of Zn-ferrite towards thermochemical utilization of carbon dioxide: A thermodynamic investigation. *Energy Conversion and Management*, **2021**, 245, 114528	10.6	1
15	Experimental Investigation of Isothermal Vapor□Liquid Equilibrium and Estimation of Excess Thermodynamic Properties (hE) of CHO2K□H2O from 278.15 to 423.15 K. *Journal of Chemical & Engineering Data*, **2019**, 64, 1488-1500	2.8	0
14	Thermodynamic study of the effect of partial thermal reduction of dysprosium oxide on solar-to-fuel energy conversion efficiency. *Fuel*, **2020**, 278, 118249	7.1	0
13	Production of solar CO via two-step neodymium oxide based thermochemical CO2 splitting cycle. *Fuel*, **2020**, 282, 118803	7.1	0
12	Estimation of solar-to-fuel energy conversion efficiency of a solar driven samarium oxide-based thermochemical CO2 splitting cycle **2020**, 10, 725-735		0
11	H2 generation via solar assisted CaO/Ca thermochemical H2O splitting cycle. *International Journal of Hydrogen Energy*, **2021**, 46, 12095-12104	6.7	0
10	Utilization of Niobium Pentoxide based redox reactions for solar hydrogen generation via thermochemical water splitting cycle. *International Journal of Hydrogen Energy*, **2021**, 46, 11242-11251	6.7	0

9	Catalytic Reduction of CO2 into Solar Fuels via Ferrite Based Thermochemical Redox Reactions. *MRS Advances*, **2017**, 2, 3389-3395	0.7
8	Guest editorial for the special issue energy research for better sustainability. *International Journal of Energy Research*, **2020**, 44, 12208-12208	4.5
7	Solar driven MgO/Mg based methane reforming and water splitting process: A thermodynamic inspection. *International Journal of Hydrogen Energy*, **2020**, 45, 10313-10323	6.7
6	Solar syngas production via methanothermal reduction of strontium oxide. *Fuel*, **2020**, 280, 118466	7.1
5	Solar thermochemical splitting of H2O using Ca-Ferrite based redox reactions: Effect of partial pressure of O2. *International Journal of Hydrogen Energy*, **2021**, 46, 11232-11241	6.7
4	Moderate Temperature Treatment of Gas-Phase Volatile Organic Toluene Using NiO and NiO□TiO2 Nano-catalysts: Characterization and Kinetic Behaviors. *Waste and Biomass Valorization*, **2021**, 12, 3075-3089	3.2
3	Solar thermochemical conversion of CO2 into fuels using gadolinium sesquioxide: A thermodynamic efficiency analysis. *International Journal of Energy Research*, **2021**, 45, 8202-8213	4.5
2	A solar thermochemical praseodymium sesquioxide assisted CO2 splitting cycle. *International Journal of Energy Research*, **2021**, 45, 9999-10011	4.5
1	Thermodynamic evaluation of solar assisted ZnO/Zn thermochemical CO splitting cycle.. *Environmental Research*, **2022**, 113266	7.9