

# Anand Kumar

## 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.

93  
papers

2,341  
citations

32  
h-index

44  
g-index

98  
ext. papers

2,901  
ext. citations

5.5  
avg, IF

5.86  
L-index

#	Paper	IF	Citations
93	Heavy metal ions removal from industrial wastewater using magnetic nanoparticles (MNP). <i>Applied Surface Science</i> , <b>2020</b> , 506, 144924	6.7	94
92	Solution combustion synthesis of metal nanopowders: Nickel Reaction pathways. <i>AIChE Journal</i> , <b>2011</b> , 57, 2207-2214	3.6	91
91	Thermodynamic analysis of solar driven SnO <sub>2</sub> /SnO based thermochemical water splitting cycle. <i>Energy Conversion and Management</i> , <b>2017</b> , 135, 226-235	10.6	82
90	Combustion synthesis of bifunctional LaMO <sub>3</sub> (M = Cr, Mn, Fe, Co, Ni) perovskites for oxygen reduction and oxygen evolution reaction in alkaline media. <i>Journal of Electroanalytical Chemistry</i> , <b>2018</b> , 809, 22-30	4.1	76
89	A decade of ceria based solar thermochemical H <sub>2</sub> O/CO <sub>2</sub> splitting cycle. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 34-60	6.7	76
88	Solar hydrogen production via thermochemical iron oxide/iron sulfate water splitting cycle. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 1639-1650	6.7	70
87	Solution combustion synthesis of metal nanopowders: Copper and copper/nickel alloys. <i>AIChE Journal</i> , <b>2011</b> , 57, 3473-3479	3.6	64
86	Combustion synthesis of Ni, Fe and Cu multi-component catalysts for hydrogen production from ethanol reforming. <i>Applied Catalysis A: General</i> , <b>2011</b> , 401, 20-28	5.1	60
85	Impregnated layer combustion synthesis method for preparation of multicomponent catalysts for the production of hydrogen from oxidative reforming of methanol. <i>Applied Catalysis A: General</i> , <b>2010</b> , 372, 175-183	5.1	56
84	Removal of emerging pharmaceuticals from wastewater by ozone-based advanced oxidation processes. <i>Environmental Progress and Sustainable Energy</i> , <b>2016</b> , 35, 982-995	2.5	55
83	Combustion synthesis of copper/nickel catalysts for hydrogen production from ethanol. <i>Chemical Engineering Journal</i> , <b>2015</b> , 278, 46-54	14.7	53
82	Solar Hydrogen Production via a Samarium Oxide-Based Thermochemical Water Splitting Cycle. <i>Energies</i> , <b>2016</b> , 9, 316	3.1	52
81	Cellulose assisted combustion synthesis of porous Cu/Ni nanopowders. <i>RSC Advances</i> , <b>2015</b> , 5, 28703-28712	3.7	51
80	Solar thermochemical ZnO/ZnSO <sub>4</sub> water splitting cycle for hydrogen production. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 23474-23483	6.7	49
79	Assessment of Ce Zr Hf O <sub>2</sub> based oxides as potential solar thermochemical CO <sub>2</sub> splitting materials. <i>Ceramics International</i> , <b>2016</b> , 42, 9354-9362	5.1	47
78	A comparative thermodynamic analysis of samarium and erbium oxide based solar thermochemical water splitting cycles. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 23416-23426	6.7	47
77	Combustion Synthesis of a Nickel Supported Catalyst: Effect of Metal Distribution on the Activity during Ethanol Decomposition. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2012</b> , 51, 12004-12008	3.9	46

76	Transition metal doped ceria for solar thermochemical fuel production. <i>Solar Energy</i> , <b>2018</b> , 172, 204-2116.8	44
75	Solar hydrogen production via erbium oxide based thermochemical water splitting cycle. <i>Journal of Renewable and Sustainable Energy</i> , <b>2016</b> , 8, 034702	2.5 42
74	Catalytic evaluation of nickel nanoparticles in methane steam reforming. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 22876-22885	6.7 42
73	Study of ethanol dehydrogenation reaction mechanism for hydrogen production on combustion synthesized cobalt catalyst. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 23464-23473	6.7 41
72	Synthesis of Highly Efficient Bifunctional Ag/CoO Catalyst for Oxygen Reduction and Oxygen Evolution Reactions in Alkaline Medium. <i>ACS Omega</i> , <b>2018</b> , 3, 7745-7756	3.9 41
71	A comprehensive and critical review on recent progress in anode catalyst for methanol oxidation reaction. <i>Catalysis Reviews - Science and Engineering</i> , <b>2020</b> , 1-103	12.6 41
70	In situ DRIFTS Studies on Cu, Ni and CuNi catalysts for Ethanol Decomposition Reaction. <i>Catalysis Letters</i> , <b>2016</b> , 146, 778-787	2.8 40
69	Solar Thermochemical Hydrogen Production via Terbium Oxide Based Redox Reactions. <i>International Journal of Photoenergy</i> , <b>2016</b> , 2016, 1-9	2.1 40
68	Effectiveness of Ni incorporation in iron oxide crystal structure towards thermochemical CO <sub>2</sub> splitting reaction. <i>Ceramics International</i> , <b>2017</b> , 43, 5150-5155	5.1 39
67	Highly efficient nonenzymatic glucose sensors based on CuO nanoparticles. <i>Applied Surface Science</i> , <b>2019</b> , 481, 712-722	6.7 37
66	Sol-gel derived CeO <sub>2</sub> /Fe <sub>2</sub> O <sub>3</sub> nanoparticles: Synthesis, characterization and solar thermochemical application. <i>Ceramics International</i> , <b>2016</b> , 42, 6728-6737	5.1 37
65	Cobalt oxide nanopowder synthesis using cellulose assisted combustion technique. <i>Ceramics International</i> , <b>2016</b> , 42, 12771-12777	5.1 37
64	In situ XAS and FTIR studies of a multi-component Ni/Fe/Cu catalyst for hydrogen production from ethanol. <i>Applied Catalysis A: General</i> , <b>2013</b> , 467, 593-603	5.1 36
63	Electrochemical oxidation of ammonia on nickel oxide nanoparticles. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 10398-10408	6.7 35
62	A review of recent advances in water-gas shift catalysis for hydrogen production. <i>Emergent Materials</i> , <b>2020</b> , 3, 881-917	3.5 34
61	Highly active and stable bi-functional NiCoO <sub>2</sub> catalyst for oxygen reduction and oxygen evolution reactions in alkaline medium. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 16603-16614	6.7 31
60	Hydrogen production by ethanol decomposition and partial oxidation over copper/copper-chromite based catalysts prepared by combustion synthesis. <i>Catalysis Today</i> , <b>2013</b> , 203, 163-175	5.3 31
59	Solar co-production of samarium and syngas via methanothermal reduction of samarium sesquioxide. <i>Energy Conversion and Management</i> , <b>2016</b> , 112, 413-422	10.6 28

58	Propylene oxide assisted sol-gel synthesis of zinc ferrite nanoparticles for solar fuel production. <i>Ceramics International</i> , <b>2016</b> , 42, 2431-2438	5.1	28
57	Potential use of solar photocatalytic oxidation in removing emerging pharmaceuticals from wastewater: A pilot plant study. <i>Solar Energy</i> , <b>2018</b> , 172, 128-140	6.8	28
56	CO <sub>2</sub> Capture Using Aqueous Potassium Carbonate Promoted by Ethylaminoethanol: A Kinetic Study. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2016</b> , 55, 5238-5246	3.9	28
55	Influence of fuel ratio on the performance of combustion synthesized bifunctional cobalt oxide catalysts for fuel cell application. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 436-445	6.7	27
54	Recent advances in cobalt based heterogeneous catalysts for oxygen evolution reaction. <i>Inorganica Chimica Acta</i> , <b>2020</b> , 511, 119854	2.7	26
53	Synthesis and growth mechanism of bamboo like N-doped CNT/Graphene nanostructure incorporated with hybrid metal nanoparticles for overall water splitting. <i>Carbon</i> , <b>2020</b> , 170, 452-463	10.4	23
52	Single Step Synthesis of Porous NiCoO <sub>2</sub> for Effective Electrooxidation of Glycerol in Alkaline Medium. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, J3301-J3309	3.9	23
51	Modeling Impregnated Layer Combustion Synthesis of Catalysts for Hydrogen Generation from Oxidative Reforming of Methanol. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2010</b> , 49, 11001-11008	3.9	22
50	Photocatalytic conversion of CO <sub>2</sub> and H <sub>2</sub> O to useful fuels by nanostructured composite catalysis. <i>Applied Surface Science</i> , <b>2019</b> , 483, 363-372	6.7	21
49	La-Based Perovskites as Oxygen-Exchange Redox Materials for Solar Syngas Production. <i>MRS Advances</i> , <b>2017</b> , 2, 3365-3370	0.7	19
48	Probing the effect of combustion controlled surface alloying in silver and copper towards ORR and OER in alkaline medium. <i>Journal of Electroanalytical Chemistry</i> , <b>2019</b> , 844, 66-77	4.1	18
47	Development of CuAg/CuO nanoparticles on carbon nitride surface for methanol oxidation and selective conversion of carbon dioxide into formate. <i>Journal of Colloid and Interface Science</i> , <b>2020</b> , 578, 726-737	9.3	18
46	Sol-Gel Synthesis of Nanocrystalline Ni-Ferrite and Co-Ferrite Redox Materials for Thermochemical Production of Solar Fuels. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1675, 203-208		18
45	Effect of Ni incorporation in cobalt oxide lattice on carbon formation during ethanol decomposition reaction. <i>Applied Catalysis B: Environmental</i> , <b>2019</b> , 254, 300-311	21.8	16
44	Surface Alloying in Silver-Cobalt through a Second Wave Solution Combustion Synthesis Technique. <i>Nanomaterials</i> , <b>2018</b> , 8,	5.4	16
43	Current Trends in Cellulose Assisted Combustion Synthesis of Catalytically Active Nanoparticles. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 7681-7689	3.9	14
42	An active and stable NiOMgO solid solution based catalysts prepared by paper assisted combustion synthesis for the dry reforming of methane. <i>Applied Catalysis B: Environmental</i> , <b>2020</b> , 273, 119056	21.8	14
41	PdZn nanoparticle electrocatalysts synthesized by solution combustion for methanol oxidation reaction in an alkaline medium. <i>RSC Advances</i> , <b>2017</b> , 7, 42709-42717	3.7	14

40	Preparation of Nanoparticles via Cellulose-Assisted Combustion Synthesis. <i>International Journal of Self-Propagating High-Temperature Synthesis</i> , <b>2018</b> , 27, 141-153	0.7	14
39	Preparation of Mesoporous/Microporous MnCo <sub>2</sub> O <sub>4</sub> and Nanocubic MnCr <sub>2</sub> O <sub>4</sub> Using a Single Step Solution Combustion Synthesis for Bifunction Oxygen Electrocatalysis. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 054507	3.9	12
38	Thermodynamic investigation of hydrogen enrichment and carbon suppression using chemical additives in ethanol dry reforming. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 15149-15157	6.7	12
37	Kinetics of CO <sub>2</sub> Adsorption/Desorption of Polyethyleneimine-Mesoporous Silica. <i>Chemical Engineering and Technology</i> , <b>2017</b> , 40, 1802-1809	2	11
36	Mineralization of dichloromethane using solar-oxidation and activated TiO <sub>2</sub> : Pilot scale study. <i>Solar Energy</i> , <b>2018</b> , 172, 116-127	6.8	11
35	Enhancing the electrocatalytic properties of LaMnO <sub>3</sub> by tuning surface oxygen deficiency through salt assisted combustion synthesis. <i>Catalysis Today</i> , <b>2021</b> , 375, 484-493	5.3	11
34	Development of Co/Co <sub>9</sub> S <sub>8</sub> metallic nanowire anchored on N-doped CNTs through the pyrolysis of melamine for overall water splitting. <i>Electrochimica Acta</i> , <b>2021</b> , 368, 137642	6.7	11
33	Advanced wastewater treatment using microalgae: effect of temperature on removal of nutrients and organic carbon. <i>IOP Conference Series: Earth and Environmental Science</i> , <b>2017</b> , 67, 012032	0.3	10
32	Nanosheet Synthesis of Mixed CoO/CuO Combustion Method for Methanol Oxidation and Carbon Dioxide Reduction. <i>Langmuir</i> , <b>2020</b> , 36, 12760-12771	4	10
31	Catalytic Methane Decomposition to Carbon Nanostructures and CO-Free Hydrogen: A Mini-Review. <i>Nanomaterials</i> , <b>2021</b> , 11,	5.4	10
30	Effect of fuel content on the electrocatalytic methanol oxidation performance of Pt/ZnO nanoparticles synthesized by solution combustion. <i>Applied Surface Science</i> , <b>2019</b> , 492, 73-81	6.7	9
29	Synthesis of hydroxide nanoparticles of Co/Cu on carbon nitride surface via galvanic exchange method for electrocatalytic CO <sub>2</sub> reduction into formate. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2020</b> , 598, 124835	5.1	9
28	Removal of volatile sulfur compounds by solar advanced oxidation technologies and bioprocesses. <i>Solar Energy</i> , <b>2016</b> , 135, 348-358	6.8	9
27	Combustion synthesis: a novel method of catalyst preparation. <i>Catalysis</i> , <b>2019</b> , 297-346	1.6	9
26	Thermodynamic evaluation of hydrazine assisted glycerol reforming for syngas production and coke inhibition. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 12999-13008	6.7	9
25	Zn-enriched PtZn nanoparticle electrocatalysts synthesized by solution combustion for ethanol oxidation reaction in an alkaline medium. <i>MRS Communications</i> , <b>2018</b> , 8, 411-419	2.7	8
24	Ag/Co <sub>3</sub> O <sub>4</sub> as an effective catalyst for glycerol electro-oxidation in alkaline medium. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 4788-4797	6.7	8
23	Galvanic Exchange as a Novel Method for Carbon Nitride Supported CoAg Catalyst Synthesis for Oxygen Reduction and Carbon Dioxide Conversion. <i>Catalysts</i> , <b>2019</b> , 9, 860	4	7

22	Low Temperature Activation of Carbon Dioxide by Ammonia in Methane Dry Reforming: Thermodynamic Study. <i>Catalysts</i> , <b>2018</b> , 8, 481	4	6
21	Solar thermochemical Dy <sub>2</sub> O <sub>3</sub> /DyO water splitting cycle for hydrogen production. <i>International Journal of Exergy</i> , <b>2017</b> , 22, 54	1.2	4
20	A review of g-C <sub>3</sub> N <sub>4</sub> based catalysts for direct methanol fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> ,	6.7	4
19	Thermodynamic exergy analysis of dysprosium oxide-based solar thermochemical water-splitting cycle. <i>International Journal of Exergy</i> , <b>2017</b> , 23, 226	1.2	3
18	Electrocatalytic conversion of CO <sub>2</sub> over in-situ grown Cu microstructures on Cu and Zn foils. <i>Journal of CO<sub>2</sub> Utilization</i> , <b>2021</b> , 53, 101749	7.6	3
17	Kinetics of reactive absorption of CO <sub>2</sub> using aqueous blend of potassium carbonate, ethylaminoethanol, and N-methyl-2-Pyrrolidone (APCEN solvent). <i>Journal of the Taiwan Institute of Chemical Engineers</i> , <b>2018</b> , 89, 191-197	5.3	3
16	Synthesis of fumed silica supported Ni catalyst for carbon dioxide conversion to methane <b>2020</b> , 10, 715-724		2
15	Ethanol Decomposition and Dehydrogenation for Hydrogen Production: A Review of Heterogeneous Catalysts. <i>Industrial &amp; Engineering Chemistry Research</i> ,	3.9	2
14	Thermochemical splitting of CO <sub>2</sub> using solution combustion synthesized LaMO <sub>3</sub> (where, M=Co, Fe, Mn, Ni, Al, Cr, Sr). <i>Applied Surface Science</i> , <b>2020</b> , 509, 144908	6.7	2
13	A thermodynamic study of propanol reforming in presence of hydrazine for hydrogen production. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 4716-4723	6.7	2
12	Thermochemical Conversion of CO <sub>2</sub> into Solar Fuels Using Ferrite Nanomaterials <b>2015</b> , 141-148		1
11	Single step synthesis of transition metal nanoparticles in aqueous phase for catalytic applications <b>2015</b> , 69-80		1
10	Thermodynamic Analysis of Solar Fuel Production via Thermochemical H <sub>2</sub> O and/or CO <sub>2</sub> Splitting Using Tin Oxide Based Redox Reactions <b>2015</b> , 39-48		1
9	Delivery of Immunomodulatory Microparticles in a Murine Model of Rotator Cuff Tear. <i>MRS Advances</i> , <b>2018</b> , 3, 1341-1346	0.7	1
8	Solar Fuel Production via Non-Stoichiometric CexZryHfzO2-Based Two-Step Thermochemical Redox Cycle <b>2015</b> , 117-124		1
7	Design of Ni/La <sub>2</sub> O <sub>3</sub> catalysts for dry reforming of methane: Understanding the impact of synthesis methods. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> ,	6.7	1
6	Solution combustion synthesis of Ni/LaO for dry reforming of methane: tuning the basicity alkali and alkaline earth metal oxide promoters.. <i>RSC Advances</i> , <b>2021</b> , 11, 33734-33743	3.7	1
5	Effect of nickel on combustion synthesized copper/fumed-SiO <sub>2</sub> catalyst for selective reduction of CO <sub>2</sub> to CO. <i>International Journal of Energy Research</i> ,	4.5	1

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|---|---|-----|---|
| 4 | Highly efficient methanol oxidation reaction on durable Co <sub>9</sub> S <sub>8</sub> @N, S-doped CNT catalyst for methanol fuel cell applications. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> ,              | 6.7 | 1 |
| 3 | Electrocatalytic Oxidation of Methanol Over Silver-Based Ag-M/C (M = Cu, Zn, Fe, Cr, Mn) Electrocatalysts Synthesized by Solution Combustion Technique. <i>Journal of the Electrochemical Society</i> , <b>2022</b> , 169, 054510 | 3.9 | 0 |
| 2 | Catalytic Reduction of CO <sub>2</sub> into Solar Fuels via Ferrite Based Thermochemical Redox Reactions. <i>MRS Advances</i> , <b>2017</b> , 2, 3389-3395  | 0.7 |   |
| 1 | Modeling of Reaction Front Movement in Combustion Synthesis for Catalyst Preparation <b>2015</b> , 391-399  |     |   |