Rajaram Bal

List of Publications by Year
in descending order

76	2,898	159358 30	182168 51
papers	citations	h-index	g-index

76	76	76	3513
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of metal-support interaction on activity and stability of Ni-CeO2 catalyst for partial oxidation of methane. Applied Catalysis B: Environmental, 2017, 202, 473-488.	10.8	180
2	Ni/CeO2 catalysts for methane partial oxidation: Synthesis driven structural and catalytic effects. Applied Catalysis B: Environmental, 2016, 189, 233-241.	10.8	141
3	Synthesis of highly coke resistant Ni nanoparticles supported MgO/ZnO catalyst for reforming of methane with carbon dioxide. Applied Catalysis B: Environmental, 2016, 191, 165-178.	10.8	139
4	Selective Oxidation of Propylene to Propylene Oxide over Silver-Supported Tungsten Oxide Nanostructure with Molecular Oxygen. ACS Catalysis, 2014, 4, 2169-2174.	5.5	114
5	Energy efficient methane tri-reforming for synthesis gas production over highly coke resistant nanocrystalline Niâ€“ZrO2 catalyst. Applied Energy, 2016, 178, 110-125.	5.1	104
6	Catalytic Oxidation of Aniline to Azoxybenzene Over CuCr₂O₄ Spinel Nanoparticle Catalyst. ACS Sustainable Chemistry and Engineering, 2014, 2, 584-589.	3.2	99
7	Preparation of the CuCr₂O₄ spinel nanoparticles catalyst for selective oxidation of toluene to benzaldehyde. Green Chemistry, 2014, 16, 2500-2508.	4.6	99
8	Room temperature selective oxidation of aniline to azoxybenzene over a silver supported tungsten oxide nanostructured catalyst. Green Chemistry, 2015, 17, 1867-1876.	4.6	92
9	Nanocrystalline Pt-CeO₂as an efficient catalyst for a room temperature selective reduction of nitroarenes. Green Chemistry, 2015, 17, 785-790.	4.6	89
10	Synergistic Effect between Ultrasmall Cu(II) Oxide and CuCr₂O₄ Spinel Nanoparticles in Selective Hydroxylation of Benzene to Phenol with Air as Oxidant. ACS Catalysis, 2015, 5, 2850-2858.	5.5	81
11	Selective oxidation of cyclohexene to adipic acid over silver supported tungsten oxide nanostructured catalysts. Green Chemistry, 2014, 16, 2826.	4.6	78
12	Low temperature dry reforming of methane over Pd-CeO2 nanocatalyst. Catalysis Communications, 2017, 92, 19-22.	1.6	76
13	Synthesis and catalytic activity of a Pd doped Niâ€“MgO catalyst for dry reforming of methane. Journal of Materials Chemistry A, 2017, 5, 15688-15699.	5.2	72
14	Fabrication of Three-Dimensional (3D) Raspberry-Like Copper Chromite Spinel Catalyst in a Facile Hydrothermal Route and Its Activity in Selective Hydroxylation of Benzene to Phenol. ACS Applied Materials & Interfaces, 2014, 6, 14451-14459.	4.0	58
15	Defect-Induced Efficient Partial Oxidation of Methane over Nonstoichiometric Ni/CeO₂ Nanocrystals. Journal of Physical Chemistry C, 2015, 119, 13610-13618.	1.5	57
16	Room temperature selective oxidation of cyclohexane over Cu-nanoclusters supported on nanocrystalline Cr2O3. Green Chemistry, 2012, 14, 2600.	4.6	56
17	Synthesis and support composition effects on CH4 partial oxidation over Niâ€“CeLa oxides. Applied Catalysis B: Environmental, 2015, 164, 135-143.	10.8	54
18	Cu nanoclusters supported on nanocrystalline SiO₂â€“MnO₂: a bifunctional catalyst for the one-step conversion of glycerol to acrylic acid. Chemical Communications, 2014, 50, 9707-9710.	2.2	51

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19	Morphologically controlled cobalt oxide nanoparticles for efficient oxygen evolution reaction. Journal of Colloid and Interface Science, 2021, 582, 322-332.	5.0	51
20	Aqueous phase reforming of glycerol to 1,2-propanediol over Pt-nanoparticles supported on hydrotalcite in the absence of hydrogen. Green Chemistry, 2012, 14, 3107.	4.6	49
21	Nanoclusters of Cu(<scp>ii</scp>) supported on nanocrystalline W(<scp>vi</scp>) oxide: a potential catalyst for single-step conversion of cyclohexane to adipic acid. Green Chemistry, 2015, 17, 3490-3499.	4.6	49
22	Ni nanocluster on modified CeO₂â€“ZrO₂ nanoporous composite for tri-reforming of methane. Catalysis Science and Technology, 2016, 6, 7122-7136.	2.1	49
23	Hydrogenation of 5-hydroxymethylfurfural to 2,5 dimethylfuran over nickel supported tungsten oxide nanostructured catalyst. Sustainable Energy and Fuels, 2018, 2, 191-198.	2.5	49
24	Reforming of methane with CO2 over Ni nanoparticle supported on mesoporous ZSM-5. Catalysis Today, 2012, 198, 209-214.	2.2	47
25	Partial oxidation of methane to synthesis gas over Pt nanoparticles supported on nanocrystalline CeO₂ catalyst. Catalysis Science and Technology, 2016, 6, 4601-4615.	2.1	46
26	Design of highly stable MgO promoted Cu/ZnO catalyst for clean methanol production through selective hydrogenation of CO2. Applied Catalysis A: General, 2021, 623, 118239.	2.2	40
27	Highly nanodispersed Gd-doped Ni/ZSM-5 catalyst for enhanced carbon-resistant dry reforming of methane. Journal of Molecular Catalysis A, 2016, 424, 17-26.	4.8	39
28	One-pot preparation of nanocrystalline Agâ€“WO₃ catalyst for the selective oxidation of styrene. RSC Advances, 2015, 5, 37610-37616.	1.7	36
29	Promoting Effect of CeO₂and MgO for CO₂Reforming of Methane over Ni-ZnO Catalyst. ChemistrySelect, 2016, 1, 3075-3085.	0.7	33
30	Low-temperature PROX (preferential oxidation) on novel CeO2-supported Cu-cluster catalysts under fuel-cell operating conditions. Chemical Communications, 2007, , 4689.	2.2	32
31	Pt nanoparticle supported on nanocrystalline CeO₂: highly selective catalyst for upgradation of phenolic derivatives present in bio-oil. Journal of Materials Chemistry A, 2014, 2, 18398-18404.	5.2	32
32	Direct catalytic oxyamination of benzene to aniline over Cu(<scp>ii</scp>) nanoclusters supported on CuCr₂O₄ spinel nanoparticles via simultaneous activation of Câ€“H and Nâ€“H bonds. Chemical Communications, 2014, 50, 13311-13314.	2.2	31
33	K-Promoted Pt-Hydrotalcite Catalyst for Production of H₂ by Aqueous Phase Reforming of Glycerol. ACS Sustainable Chemistry and Engineering, 2018, 6, 2122-2131.	3.2	29
34	Cetyl alcohol mediated fabrication of forest of Ag/Mn₃O₄ nanowhiskers catalyst for the selective oxidation of styrene with molecular oxygen. RSC Advances, 2015, 5, 89879-89887.	1.7	28
35	Preparation of CeO2 nanoparticles supported on 1-D silica nanostructures for room temperature selective oxidation of styrene. RSC Advances, 2014, 4, 5453.	1.7	27
36	Fabrication of Au Nanoparticles Supported on One-Dimensional La₂O₃ Nanorods for Selective Esterification of Methacrolein to Methyl Methacrylate with Molecular Oxygen. ACS Sustainable Chemistry and Engineering, 2019, 7, 3982-3994.	3.2	27

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37	Influence of Indium as a Promoter on the Stability and Selectivity of the Nanocrystalline Cu/CeO₂ Catalyst for CO₂ Hydrogenation to Methanol. ACS Applied Materials & Interfaces, 2021, 13, 28201-28213.	4.0	27
38	Highly selective transfer hydrogenation of Î±,Î²-unsaturated carbonyl compounds using Cu-based nanocatalysts. Catalysis Science and Technology, 2017, 7, 2828-2837.	2.1	26
39	Synthesis effects on activity and stability of Pt-CeO2 catalysts for partial oxidation of methane. Molecular Catalysis, 2017, 432, 131-143.	1.0	25
40	Facile synthesis of size-controlled Ag supported on WO3 nanorods and their application as novel and active catalyst in oxidant-free dehydrogenation of benzyl alcohols. Catalysis Communications, 2019, 132, 105804.	1.6	25
41	Surfactant Promoted Synthesis of CuCr₂O₄ Spinel Nanoparticles: A Recyclable Catalyst for One-Pot Synthesis of Acetophenone from Ethylbenzene. Industrial & Engineering Chemistry Research, 2014, 53, 20056-20063.	1.8	23
42	Catalytic oxidation of aromatic amines to azoxy compounds over a Cuâ€“CeO₂ catalyst using H₂O₂ as an oxidant. RSC Advances, 2016, 6, 22812-22820.	1.7	23
43	Ptâ€“CeO₂ nanoporous spheres â€“ an excellent catalyst for partial oxidation of methane: effect of the bimodal pore structure. Catalysis Science and Technology, 2017, 7, 4720-4735.	2.1	23
44	Pt nanoparticles with tuneable size supported on nanocrystalline ceria for the low temperature water-gas-shift (WGS) reaction. Journal of Molecular Catalysis A, 2014, 395, 117-123.	4.8	21
45	Renewable Aromatics from Tree-Borne Oils over Zeolite Catalysts Promoted by Transition Metals. ACS Applied Materials & Interfaces, 2020, 12, 24756-24766.	4.0	21
46	Morphology controlled synthesis of 2D heterostructure Ag/WO3 nanocomposites for enhanced photoelectrochemical CO2 reduction performance. Journal of CO2 Utilization, 2020, 41, 101284.	3.3	20
47	Nickel Nanoparticles Immobilized over Mesoporous SBA-15 for Efficient Carbonylative Coupling Reactions Utilizing CO₂: A Spotlight. ACS Applied Materials & Interfaces, 2021, 13, 40157-40171.	4.0	20
48	In-situ experimental and computational approach to investigate the nature of active site in low-temperature CO-PROX over CuOx-CeO2 catalyst. Applied Catalysis A: General, 2021, 624, 118305.	2.2	20
49	Chloride promoted room temperature preparation of silver nanoparticles on two dimensional tungsten oxide nanoarchitectures for the catalytic oxidation of tertiary N-compounds to N-oxides. Nanoscale, 2015, 7, 15197-15208.	2.8	18
50	Fabrication of Ag/Mn₃O₄ nano-architectures for the one-step selective oxidation of 3-picoline to niacin: a key to vitamin B₃ production. Catalysis Science and Technology, 2016, 6, 4644-4654.	2.1	18
51	Combined experimental and computational study to unravel the factors of the Cu/TiO2 catalyst for CO2 hydrogenation to methanol. Journal of CO2 Utilization, 2021, 50, 101576.	3.3	18
52	Fabrication of Silverâ€“Tungsten Wafer-like Nanoarchitectures for Selective Epoxidation of Alkenes. ACS Sustainable Chemistry and Engineering, 2015, 3, 2823-2830.	3.2	17
53	Development of Highly Efficient and Durable Three-Dimensional Octahedron NiCo₂O₄ Spinel Nanoparticles toward the Selective Oxidation of Styrene. Industrial & Engineering Chemistry Research, 2019, 58, 18168-18177.	1.8	17
54	Heterogeneous recyclable copper oxide supported on activated red mud as an efficient and stable catalyst for the one pot hydroxylation of benzene to phenol. Molecular Catalysis, 2021, 499, 111310.	1.0	16

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55	Morphology-controlled synthesis of TiO2 nanostructures for environmental application. Catalysis Communications, 2016, 74, 43-48.	1.6	15
56	Low-temperature catalytic oxidation of aniline to azoxybenzene over an Ag/Fe₂O₃ nanoparticle catalyst using H₂O₂ as an oxidant. New Journal of Chemistry, 2019, 43, 8911-8918.	1.4	15
57	Room temperature selective reduction of nitroarenes to azoxy compounds over Ni-TiO2 catalyst. Molecular Catalysis, 2020, 490, 110943.	1.0	14
58	One-pot transformation of glucose into hydroxymethyl furfural in water over Pd decorated acidic ZrO2. Renewable Energy, 2022, 183, 791-801.	4.3	14
59	Surfactantâ€Induced Preparation of Highly Dispersed Niâ€Nanoparticles Supported on Nanocrystalline ZrO₂ for Chemoselective Reduction of Nitroarenes. ChemistrySelect, 2018, 3, 1129-1141.	0.7	13
60	Metal and solvent-dependent activity of spinel-based catalysts for the selective hydrogenation and rearrangement of furfural. Sustainable Energy and Fuels, 2021, 5, 3191-3204.	2.5	12
61	Graphene oxide supported Pd-Fe nanohybrid as an efficient electrocatalyst for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2020, 45, 18704-18715.	3.8	10
62	Unraveling the Synergistic Participation of Niâ€“Sn in Nanostructured NiO/SnO₂ for the Catalytic Transfer Hydrogenolysis of Benzyl Phenyl Ether. Energy & Fuels, 2022, 36, 4404-4415.	2.5	10
63	Preparation of Nanostructured Pdâ€Fe₂O₃ Catalyst for Câ€“C Coupling Reaction. ChemistrySelect, 2019, 4, 10566-10575.	0.7	8
64	Synthesis of Ni-Pd decorated spindle-shape CeO2 for catalytic reduction of nitroarene. Catalysis Communications, 2020, 142, 106038.	1.6	8
65	Understanding the Origin of Structure Sensitivity in Nano Crystalline Mixed Cu/Mgâ^'Al Oxides Catalyst for Lowâ€Pressure Methanol Synthesis. ChemCatChem, 2021, 13, 3290-3302.	1.8	8
66	Selective transfer hydrogenation of biomass derived furanic molecules using cyclohexanol as a hydrogen donor over nanostructured Cu/MgO catalyst. Molecular Catalysis, 2021, 513, 111812.	1.0	8
67	Preparation and characterization of a copper oxide nanoparticle-supported red-mud catalyst for liquid phase oxidation of ethyl benzene to acetophenone. New Journal of Chemistry, 2021, 45, 13070-13079.	1.4	7
68	Role of Interfacial Cuâ€Ions in Polycrystalline Cuâ€CeO 2 : Inâ€Situ Raman, Inâ€situ DRIFT and DFT Studies for Preferential Oxidation of CO in Presence of Excess H 2 **. ChemistrySelect, 2021, 6, 13051-13059.	0.7	7
69	Synthesis of Highly Active Pd Nanoparticles Supported Iron Oxide Catalyst for Selective Hydrogenation and Crossâ€Coupling Reactions in Aqueous Medium. ChemistrySelect, 2019, 4, 5019-5032.	0.7	6
70	Catalytic transformation of ethanol to methane and butene over NiO NPs supported over mesoporous SBA-15. Molecular Catalysis, 2021, 502, 111381.	1.0	6
71	Modulation of Ru and Cu nanoparticle contents over CuAlPO-5 for synergistic enhancement in the selective reduction and oxidation of biomass-derived furan based alcohols and carbonyls. Catalysis Science and Technology, 2021, 11, 4133-4148.	2.1	6
72	Pd-Decorated CePO₄ Catalyst for the One-Pot, Two-Step Cascade Reaction to Transform Biomass-Derived Furanic Aldehydes into Fuel Intermediates. Energy & Fuels, 2021, 35, 11366-11381.	2.5	5

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73	Aqueous phase hydrogenolysis of renewable glycerol to 1, 2-propanediol over bimetallic highly stable and efficient Ni-Cu/Al2O3 catalyst. Molecular Catalysis, 2021, 515, 111943.	1.0	5
74	Direct oxidation of cyclohexane to adipic acid in air over Co3O4@ZrO2 nanostructured catalyst. Molecular Catalysis, 2022, 528, 112473.	1.0	4
75	Synthesis of sub-nanometric Cu₂O catalysts for Pd-free Câ€“C coupling reactions. Reaction Chemistry and Engineering, 2021, 6, 929-936.	1.9	3
76	TiO₂ supported cobalt oxide for olefin epoxidation reaction â€“ characterization, catalytic activities and mechanism â€“ using a DFT model. Dalton Transactions, 2022, 51, 10486-10500.	1.6	2