Balaji R Jagirdar

List of Publications by Year
in descending order

63 papers	2,063 citations	304743 22 h-index	243625 44 g-index
66 all docs	66 docs citations	66 times ranked	2475 citing authors

#	Article	IF	Citations
1	Nanostructured Cu and Cu@Cu2O core shell catalysts for hydrogen generation from ammoniaâ€“borane. Physical Chemistry Chemical Physics, 2008, 10, 5870.	2.8	243
2	First Row Transition Metal Ion-Assisted Ammoniaâ^'Borane Hydrolysis for Hydrogen Generation. Inorganic Chemistry, 2008, 47, 7424-7429.	4.0	201
3	Nanocatalysis and Prospects of Green Chemistry. ChemSusChem, 2012, 5, 65-75.	6.8	193
4	Hydrolysis of Ammonia Borane as a Hydrogen Source: Fundamental Issues and Potential Solutions Towards Implementation. ChemSusChem, 2011, 4, 1731-1739.	6.8	158
5	Coâ€“Co₂B, Niâ€“Ni₃B and Coâ€“Niâ€“B nanocomposites catalyzed ammoniaâ€“borane methanolysis for hydrogen generation. Physical Chemistry Chemical Physics, 2009, 11, 770-775.	2.8	91
6	Highly Monodisperse Colloidal Magnesium Nanoparticles by Room Temperature Digestive Ripening. Inorganic Chemistry, 2009, 48, 4524-4529.	4.0	88
7	Cu2+-induced room temperature hydrogen release from ammonia borane. Energy and Environmental Science, 2009, 2, 1274.	30.8	77
8	Au@Pd Coreâ^'Shell Nanoparticles through Digestive Ripening. Journal of Physical Chemistry C, 2008, 112, 10089-10094.	3.1	60
9	Synthesis of Cu@ZnO Coreâ^'Shell Nanocomposite through Digestive Ripening of Cu and Zn Nanoparticles. Journal of Physical Chemistry C, 2008, 112, 4042-4048.	3.1	59
10	Heterolytic Activation of Hâ^'X (X = H, Si, B, and C) Bonds:Â An Experimental and Theoretical Investigation. Journal of the American Chemical Society, 2007, 129, 5587-5596.	13.7	51
11	Chemical Synthesis of Metal Nanoparticles Using Amineâ€“Boranes. ChemSusChem, 2011, 4, 317-324.	6.8	49
12	Metal and Alloy Nanoparticles by Amine-Borane Reduction of Metal Salts by Solid-Phase Synthesis: Atom Economy and Green Process. Inorganic Chemistry, 2012, 51, 13023-13033.	4.0	46
13	Metal Nanoparticles via the Atom-Economy Green Approach. Inorganic Chemistry, 2010, 49, 3965-3967.	4.0	40
14	Bimetallic coreâ€“shell nanocomposites using weak reducing agent and their transformation to alloy nanostructures. Dalton Transactions, 2013, 42, 7147.	3.3	39
15	From (Au₅Sn + AuSn) physical mixture to phase pure AuSn and Au₅Sn intermetallic nanocrystals with tailored morphology: digestive ripening assisted approach. Physical Chemistry Chemical Physics, 2014, 16, 11381-11389.	2.8	35
16	Synthesis and characterization of Pd(0), PdS, and Pd@PdO coreâ€“shell nanoparticles by solventless thermolysis of a Pdâ€“thiolate cluster. Journal of Solid State Chemistry, 2010, 183, 2059-2067.	2.9	34
17	Influence of the Cone Angles and the Ï€-Acceptor Properties of Phosphorus-Containing Ligands in the Chemistry of Dihydrogen Complexes of Ruthenium. Organometallics, 2000, 19, 4506-4517.	2.3	31
18	Monodispersity and stability: case of ultrafine aluminium nanoparticles (<5 nm) synthesized by the solvated metal atom dispersion approach. Journal of Materials Chemistry, 2012, 22, 9058.	6.7	30

#	Article	IF	Citations
19	Size Modulation of Colloidal Au Nanoparticles via Digestive Ripening in Conjunction with a Solvated Metal Atom Dispersion Method: An Insight Into Mechanism. Journal of Physical Chemistry C, 2014, 118, 18214-18225.	3.1	30
20	Nature of hydrogen atom trapped inside palladium lattice. International Journal of Hydrogen Energy, 2010, 35, 6804-6811.	7.1	29
21	Carbonization of solvent and capping agent based enhancement in the stabilization of cobalt nanoparticles and their magnetic study. Journal of Materials Chemistry, 2012, 22, 20671.	6.7	25
22	Dynamics of acis-Dihydrogen/Hydride Complex of Iridium. Inorganic Chemistry, 2005, 44, 6203-6210.	4.0	23
23	A journey from bulk brass to nanobrass: A comprehensive study showing structural evolution of various Cu/Zn bimetallic nanophases from the vaporization of brass. Journal of Alloys and Compounds, 2017, 694, 581-595.	5.5	22
24	Highly Electrophilic, 16-Electron [Ru(P(OMe)(OH)2)(dppe)2]2+Complex Turns H2(g) into a Strong Acid and Splits a Siâ˜'H Bond Heterolytically. Synthesis and Structure of the Novel Phosphorous Acid Complex [Ru(P(OH)3)(dppe)2]2+. Inorganic Chemistry, 2005, 44, 4145-4147.	4.0	20
25	Photolysis of arene chromium tricarbonyl complexes in presence of amineâ€"boranes: Observation of Ïƒ-borane complexes in solution. Inorganica Chimica Acta, 2011, 372, 200-205.	2.4	20
26	Organometallic Access to IntermetallicÎ¸â€CuE2(E = Al, Ga) and Cu1â€"xAlxPhases. European Journal of Inorganic Chemistry, 2008, 2008, 3330-3339.	2.0	19
27	Trans â†' Cis Isomerization oftrans-[(dppm)2Ru(H)(L)][BF4] (L = P(OR)3) Complexes:Â Preparation ofcis-[(dppm)2Ru(Î·2-H2)(L)][BF4]2â€. Inorganic Chemistry, 2003, 42, 187-197.	4.0	18
28	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
29	Colloidal calcium nanoparticles: digestive ripening in the presence of a capping agent and coalescence of particles under an electron beam. RSC Advances, 2012, 2, 259-263.	3.6	17
30	Monodisperse Colloidal Metal Nanoparticles to Coreâ€"Shell Structures and Alloy Nanosystems via Digestive Ripening in Conjunction with Solvated Metal Atom Dispersion: A Mechanistic Study. Journal of Physical Chemistry C, 2018, 122, 10559-10574.	3.1	17
31	Effect of the Crystallographic Phase of Ruthenium Nanosponges on Arene and Substitutedâ€Arene Hydrogenation Activity. ChemCatChem, 2018, 10, 3086-3095.	3.7	17
32	Digestive ripening facilitated atomic diffusion at nanosize regime: Case of AuIn2 and Ag3In intermetallic nanoparticles. Journal of Alloys and Compounds, 2014, 610, 35-44.	5.5	16
33	Digestive ripening: a synthetic method par excellence for coreâ€"shell, alloy, and composite nanostructured materials. Journal of Chemical Sciences, 2012, 124, 1175-1180.	1.5	15
34	Synthesis, chemistry, and structures of mono-.eta.6-arene complexes of chromium(II) bearing trichlorosilyl and carbon monoxide ligands. Organometallics, 1992, 11, 1043-1050.	2.3	14
35	Dehydrogenation of ammonia borane in fluoro alcohols. International Journal of Hydrogen Energy, 2010, 35, 10819-10825.	7.1	14
36	Colloidal europium nanoparticles via a solvated metal atom dispersion approach and their surface enhanced Raman scattering studies. Journal of Colloid and Interface Science, 2016, 476, 177-183.	9.4	13

#	Article	IF	Citations
37	Approaches to Sigma Complexes via Displacement of Agostic Interactions: An Experimental and Theoretical Investigation. Organometallics, 2017, 36, 2736-2745.	2.3	13
38	Tris(pyrazolyl)methane Sulfonate Complexes of Iridium:â€‰ Catalytic Hydrogenation of 3,3-Dimethyl-1-butene. Organometallics, 2007, 26, 6307-6311.	2.3	12
39	Novel double dealkylation of trialkylphosphite in the presence of an acid: synthesis and characterization of a 16-electron ruthenium complex bearing P(OH) 2 (OMe) ligand. Inorganic Chemistry Communication, 2004, 7, 654-656.	3.9	11
40	Digestive-Ripening-Facilitated Nanoengineering of Diverse Bimetallic Nanostructures. Langmuir, 2019, 35, 6493-6505.	3.5	11
41	Air-stable magnetic cobalt-iron (Co7Fe3) bimetallic alloy nanostructures via co-digestive ripening of cobalt and iron colloids. Journal of Alloys and Compounds, 2020, 816, 152632.	5.5	11
42	Implication of a Ïƒ-Methane Complex en Route to Elimination of Methane from a Ruthenium Complex: An Experimental and Theoretical Investigation. Organometallics, 2015, 34, 1245-1254.	2.3	10
43	Synthesis of mesoporous iridium nanosponge: a highly active, thermally stable and efficient olefin hydrogenation catalyst. Dalton Transactions, 2017, 46, 11431-11439.	3.3	10
44	A capping agent dissolution method for the synthesis of metal nanosponges and their catalytic activity towards nitroarene reduction under mild conditions. Dalton Transactions, 2018, 47, 17401-17411.	3.3	10
45	Observation of a Large Coupling of a Bound Dihydrogen Ligand to Phosphorus Ligands in trans-[(dppe)2Ru(Î·2-H2)(PF(OMe)2)][BF4]2 Complex. Inorganic Chemistry, 2000, 39, 5404-5406.	4.0	9
46	Morphological Evolution in Air-Stable Metallic Iron Nanostructures and Their Magnetic Study. Journal of Physical Chemistry C, 2015, 119, 665-674.	3.1	9
47	Transition metal complexes and catalysis. Resonance, 1999, 4, 63-81.	0.3	8
48	Magnesium/Copper Nanocomposite through Digestive Ripening. Chemistry - an Asian Journal, 2009, 4, 835-838.	3.3	8
49	Dynamics of H-atom exchange in stable cis-dihydrogen/hydride complexes of ruthenium(ii) bearing phosphine and Nâ€“N bidentate ligands. Dalton Transactions, 2014, 43, 4726.	3.3	8
50	16-Electron Elongated Dihydrogen Complex Stabilized by Agostic Interaction. Inorganic Chemistry, 2006, 45, 7047-7049.	4.0	7
51	A homobimetallic complex of chromium(0) with a Ïƒ-borane component. Dalton Transactions, 2011, 40, 10592.	3.3	7
52	Au/CdS Nanocomposite through Digestive Ripening of Au and CdS Nanoparticles and Its Photocatalytic Activity. ChemistrySelect, 2018, 3, 6638-6646.	1.5	7
53	Hydrogenation of CO2, carbonyl and imine substrates catalyzed by [IrH3(PhPNHP)] complex. Journal of Organometallic Chemistry, 2019, 883, 25-34.	1.8	7
54	Contrasting reactivity behaviour of the [RuHCl(CO)(PNP)] complex with electrophilic reagents XOTf (X = H, CH₃, Me₃Si). Dalton Transactions, 2014, 43, 14625-14635.	3.3	6

#	Article	IF	Citations
55	Synthesis and Mechanism of Formation of Metal Nanosponges and their Catalytic and Hydrogen Sorption Properties. ChemistrySelect, 2018, 3, 7184-7194.	1.5	5
56	Homobimetallic hydride and dihydrogen complexes of ruthenium bearing N-heterocyclic carbene ligands. Journal of Organometallic Chemistry, 2017, 830, 203-211.	1.8	4
57	Controlled exchange bias behavior of manganese nanoparticles. Journal of Magnetism and Magnetic Materials, 2022, 559, 169504.	2.3	4
58	Synthesis and Characterization of New Dicationic Dihydrogen Complexes of Ruthenium. Synthesis and Reactivity in Inorganic, Metal Organic, and Nano Metal Chemistry, 2007, 37, 677-684.	0.6	3
59	Reactivity studies of highly electrophilic ruthenium complexes. Inorganica Chimica Acta, 2010, 363, 3017-3022.	2.4	3
60	Temperature-dependent elongation of the H H bond in dihydrogen complexes of Ru(II) bearing an NHC ligand: Effect of the NHC and trans ligands. Inorganica Chimica Acta, 2018, 483, 411-424.	2.4	3
61	Airâ€Stable Carbonâ€Fe Based Magnetic Nanostructures. European Journal of Inorganic Chemistry, 2019, 2019, 1374-1383.	2.0	3
62	Synthesis, characterization and reactivity studies of electrophilic ruthenium(<scp>ii</scp>) complexes: a study of H₂activation and labilization. Dalton Transactions, 2014, 43, 13410-13423.	3.3	2
63	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