Vivek Polshettiwar

List of Publications by Year in Descending Order

122 papers	11,696 citations	52 h-index	107 g-index
170 ext. papers	12,752 ext. citations	8 avg, IF	6.94 L-index

#	Paper	IF	Citations
122	Visible Light-Driven Highly Selective CO Reduction to CH Using Potassium-Doped g-CN.. *Langmuir*, **2022**,	4	4
121	Plasmonic Photocatalysis for CO2 Conversion to Chemicals and Fuels **2021**, 3, 574-598		23
120	Silica-Supported Nanoparticles as Heterogeneous Catalysts **2021**, 215-238		1
119	Nitridated Fibrous Silica/Tetrabutylammonium Iodide (N-DFNS/TBAI): Robust and Efficient Catalytic System for Chemical Fixation of Carbon Dioxide to Cyclic Carbonates. *ChemCatChem*, **2021**, 13, 2907-2914	5.2	2
118	Origin of the Hierarchical Structure of Dendritic Fibrous Nanosilica: A Small-Angle X-ray Scattering Perspective. *Langmuir*, **2021**, 37, 6423-6434	4	4
117	Gold cluster-loaded dendritic nanosilica: single particle luminescence and catalytic properties in the bulk. *Nanoscale*, **2021**, 13, 9788-9797	7.7	2
116	Defective TiO for photocatalytic CO conversion to fuels and chemicals. *Chemical Science*, **2021**, 12, 4267-4299	9.4	26
115	Nitrogen doped carbon spheres with wrinkled cages for the selective oxidation of 5-hydroxymethylfurfural to 5-formyl-2-furancarboxylic acid. *Chemical Communications*, **2021**, 57, 2005-2008	5.8	6
114	Unravelling the structural hierarchy in microemulsion droplet templated dendritic fibrous nano silica. *Microporous and Mesoporous Materials*, **2021**, 323, 111234	5.3	0
113	Direct CO capture and conversion to fuels on magnesium nanoparticles under ambient conditions simply using water.. *Chemical Science*, **2021**, 12, 5774-5786	9.4	6
112	Lithium silicate nanosheets with excellent capture capacity and kinetics with unprecedented stability for high-temperature CO capture. *Chemical Science*, **2021**, 12, 4825-4835	9.4	9
111	Crystal Structure Directed Catalysis by Aluminum Metal-Organic Framework: Mechanistic Insight into the Role of Coordination of Al Sites and Entrance Size of Catalytic Pocket **2020**, 2, 699-704		5
110	Defects in nanosilica catalytically convert CO to methane without any metal and ligand. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 6383-6390	11.5	39
109	Catalytic nanosponges of acidic aluminosilicates for plastic degradation and CO to fuel conversion. *Nature Communications*, **2020**, 11, 3828	17.4	23
108	Dendritic Fibrous Nanosilica (DFNS) for RNA Extraction from Cells. *Langmuir*, **2020**, 36, 12755-12759	4	8
107	Boron Nitride and Oxide Supported on Dendritic Fibrous Nanosilica for Catalytic Oxidative Dehydrogenation of Propane. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 16124-16135	8.3	13
106	Photocatalytic Hydrogen Generation and CO2 Conversion Using g-C3N4 Decorated Dendritic Fibrous Nanosilica: Role of Interfaces between Silica and g-C3N4. *ACS Applied Energy Materials*, **2020**, 3, 8150-8158	6.1	15

105	Facile synthesis to tune size, textural properties and fiber density of dendritic fibrous nanosilica for applications in catalysis and CO capture. *Nature Protocols*, **2019**, 14, 2177-2204	18.8	56
104	Plasmonic colloidosomes of black gold for solar energy harvesting and hotspots directed catalysis for CO to fuel conversion. *Chemical Science*, **2019**, 10, 6594-6603	9.4	57
103	Solution-phase synthesis of two-dimensional silica nanosheets using soft templates and their applications in CO capture. *Nanoscale*, **2019**, 11, 5365-5376	7.7	16
102	Dendritic fibrous nano-silica supported gold nanoparticles as an artificial enzyme. *Journal of Materials Chemistry B*, **2018**, 6, 1600-1604	7.3	47
101	Negative Photochromism Based on Molecular Diffusion between Hydrophilic and Hydrophobic Particles in the Solid State. *Inorganic Chemistry*, **2018**, 57, 3671-3674	5.1	32
100	Scalable and Sustainable Synthesis of Size-Controlled Monodisperse Dendritic Fibrous Nanosilica Quantified by E-Factor. *ACS Applied Nano Materials*, **2018**, 1, 3636-3643	5.6	31
99	Self-Assembled Photonic Crystals of Monodisperse Dendritic Fibrous Nanosilica for Lasing: Role of Fiber Density. *ACS Applied Materials & Interfaces*, **2018**, 10, 23392-23398	9.5	16
98	Supported Single Atom and Pseudo-Single Atom of Metals as Sustainable Heterogeneous Nanocatalysts. *ChemCatChem*, **2018**, 10, 881-906	5.2	27
97	Synthesis of High Surface Area Carbon Nanospheres with Wrinkled Cages and Their CO2 Capture Studies. *ChemistrySelect*, **2018**, 3, 10684-10688	1.8	9
96	Probing the Interfaces in Nanosilica-Supported TiO2 Photocatalysts by Solid-State NMR and In Situ FTIR. *ChemNanoMat*, **2018**, 4, 1231-1239	3.5	5
95	Hydrothermal Crystallization of Nano-Titanium Dioxide for Enhanced Photocatalytic Hydrogen Generation. *ChemPhotoChem*, **2018**, 2, 796-800	3.3	14
94	Design of a CdS/CdSe Heterostructure for Efficient H2 Generation and Photovoltaic Applications. *Journal of Physical Chemistry C*, **2018**, 122, 12158-12167	3.8	30
93	Organosilane oxidation with a half million turnover number using fibrous nanosilica supported ultrasmall nanoparticles and pseudo-single atoms of gold. *Journal of Materials Chemistry A*, **2017**, 5, 1935-1940	13	56
92	Nanostructured Silica-Titania Hybrid using Dendritic Fibrous Nanosilica as a Photocatalyst. *ChemSusChem*, **2017**, 10, 2182-2191	8.3	29
91	Amphi-functional mesoporous silica nanoparticles for dye separation. *Journal of Materials Chemistry A*, **2017**, 5, 14914-14921	13	23
90	Photochromism of a Spiropyran in the Presence of a Dendritic Fibrous Nanosilica; Simultaneous Photochemical Reaction and Adsorption. *Journal of Physical Chemistry A*, **2017**, 121, 8080-8085	2.8	14
89	Dendritic Fibrous Nanosilica for Catalysis, Energy Harvesting, Carbon Dioxide Mitigation, Drug Delivery, and Sensing. *ChemSusChem*, **2017**, 10, 3866-3913	8.3	141
88	Unraveling the Formation Mechanism of Dendritic Fibrous Nanosilica. *Langmuir*, **2017**, 33, 13774-13782	4	39

87	KCC-1 supported palladium nanoparticles as an efficient and sustainable nanocatalyst for carbonylative Suzuki–Miyaura cross-coupling. *Green Chemistry*, **2016**, 18, 5890-5899	10	74
86	Sustainable Synthesis of Metal Oxide Nanostructures **2016**, 1-10		
85	Size and Fiber Density Controlled Synthesis of Fibrous Nanosilica Spheres (KCC-1). *Scientific Reports* , **2016**, 6, 24888	4.9	108
84	Ultrasmall nanoparticles and pseudo-single atoms of platinum supported on fibrous nanosilica (KCC-1/Pt): engineering selectivity of hydrogenation reactions. *Journal of Materials Chemistry A*, **2016**, 4, 12416-12424	13	70
83	Atomic Layer Deposited (ALD) TiO2 on Fibrous Nano-Silica (KCC-1) for Photocatalysis: Nanoparticle Formation and Size Quantization Effect. *ACS Catalysis*, **2016**, 6, 2770-2784	13.1	117
82	Design of CO2 sorbents using functionalized fibrous nanosilica (KCC-1): insights into the effect of the silica morphology (KCC-1 vs. MCM-41). *Journal of Materials Chemistry A*, **2016**, 4, 7005-7019	13	82
81	Palladium Nanoparticles Supported on Fibrous Silica (KCC-1-PEI/Pd): A Sustainable Nanocatalyst for Decarbonylation Reactions. *ChemPlusChem*, **2016**, 81, 1142-1146	2.8	34
80	SBA-15-Oxynitrides as a Solid-Base Catalyst: Effect of Nitridation Temperature on Catalytic Activity. *Angewandte Chemie - International Edition*, **2015**, 54, 5985-9	16.4	21
79	Facile and sustainable synthesis of shaped iron oxide nanoparticles: effect of iron precursor salts on the shapes of iron oxides. *Scientific Reports*, **2015**, 5, 9733	4.9	158
78	SBA-15-Oxynitrides as a Solid-Base Catalyst: Effect of Nitridation Temperature on Catalytic Activity. *Angewandte Chemie*, **2015**, 127, 6083-6087	3.6	7
77	Efficient Synthesis of Monodisperse Metal (Rh, Ru, Pd) Nanoparticles Supported on Fibrous Nanosilica (KCC-1) for Catalysis. *ACS Sustainable Chemistry and Engineering*, **2015**, 3, 3224-3230	8.3	89
76	Insights into the Catalytic Activity of Nitridated Fibrous Silica (KCC-1) Nanocatalysts from 15N and 29Si NMR Spectroscopy Enhanced by Dynamic Nuclear Polarization. *Angewandte Chemie*, **2015**, 127, 2218-2221	3.6	21
75	Insights into the catalytic activity of nitridated fibrous silica (KCC-1) nanocatalysts from (15) N and (29) Si NMR spectroscopy enhanced by dynamic nuclear polarization. *Angewandte Chemie - International Edition*, **2015**, 54, 2190-3	16.4	90
74	Dendritic silica nanomaterials (KCC-1) with fibrous pore structure possess high DNA adsorption capacity and effectively deliver genes in vitro. *Langmuir*, **2014**, 30, 10886-98	4	71
73	Size- and shape-controlled synthesis of hexagonal bipyramidal crystals and hollow self-assembled Al-MOF spheres. *ChemSusChem*, **2014**, 7, 529-35	8.3	30
72	Nitridated Fibrous Silica (KCC-1) as a Sustainable Solid Base Nanocatalyst. *ACS Sustainable Chemistry and Engineering*, **2013**, 1, 1192-1199	8.3	87
71	Introduction to Nanocatalysis **2013**, 1-9		4
70	Nanocatalysts for the Suzuki Coupling Reactions **2013**, 51-88		1

69	Nanocatalysts for Hydrogenation Reactions **2013**, 405-441		2
68	Nanocatalysts for the Heck Coupling Reactions **2013**, 11-50		1
67	Sonogashira Reactions Using Nanocatalysts **2013**, 89-131		1
66	Nanocatalysts for Rearrangement Reactions **2013**, 251-285		1
65	Shape- and Morphology-Controlled Sustainable Synthesis of Cu, Co, and In Metal Organic Frameworks with High CO2 Capture Capacity. *ACS Sustainable Chemistry and Engineering*, **2013**, 1, 66-74	8.3	42
64	Nanomaterials in Catalysis. Herausgegeben von Philippe Serp und Karine Philippot.. *Angewandte Chemie*, **2013**, 125, 11407-11407	3.6	1
63	Fibrous nano-silica (KCC-1)-supported palladium catalyst: Suzuki coupling reactions under sustainable conditions. *ChemSusChem*, **2012**, 5, 85-9	8.3	155
62	Nano-ferrites for water splitting: unprecedented high photocatalytic hydrogen production under visible light. *Nanoscale*, **2012**, 4, 5202-9	7.7	56
61	Fibrous Nano-Silica Supported Ruthenium (KCC-1/Ru): A Sustainable Catalyst for the Hydrogenolysis of Alkanes with Good Catalytic Activity and Lifetime. *ACS Catalysis*, **2012**, 2, 1425-1431	13.1	142
60	Nano cobalt oxides for photocatalytic hydrogen production. *International Journal of Hydrogen Energy*, **2012**, 37, 10462-10466	6.7	24
59	Silicon oxynitrides of KCC-1, SBA-15 and MCM-41 for CO2 capture with excellent stability and regenerability. *Chemical Science*, **2012**, 3, 2224	9.4	101
58	Synthesis of hierarchical anatase TiO2 nanostructures with tunable morphology and enhanced photocatalytic activity. *RSC Advances*, **2012**, 2, 7048	3.7	31
57	Efficient Hydrogenolysis of Alkanes at Low Temperature and Pressure Using Tantalum Hydride on MCM-41, and a Quantum Chemical Study. *ChemCatChem*, **2012**, 4, 363-369	5.2	13
56	Nanoroses of nickel oxides: synthesis, electron tomography study, and application in CO oxidation and energy storage. *ChemSusChem*, **2012**, 5, 1241-8	8.3	25
55	Suzuki-Miyaura cross-coupling coupling reactions with low catalyst loading: a green and sustainable protocol in pure water. *Dalton Transactions*, **2011**, 40, 3116-21	4.3	82
54	Magnetically recoverable nanocatalysts. *Chemical Reviews*, **2011**, 111, 3036-75	68.1	1386
53	Nanocatalysts for Suzuki cross-coupling reactions. *Chemical Society Reviews*, **2011**, 40, 5181-203	58.5	650
52	Chemistry by Nanocatalysis: First example of a solid-supported RAPTA complex for organic reactions in aqueous medium. *ChemSusChem*, **2011**, 4, 104-11	8.3	99

51	Hydro-metathesis of Olefins: A Catalytic Reaction Using a Bifunctional Single-Site Tantalum Hydride Catalyst Supported on Fibrous Silica (KCC-1) Nanospheres. *Angewandte Chemie*, **2011**, 123, 2799-2803	3.6	23
50	"Hydro-metathesis" of olefins: a catalytic reaction using a bifunctional single-site tantalum hydride catalyst supported on fibrous silica (KCC-1) Nanospheres. *Angewandte Chemie - International Edition* , **2011**, 50, 2747-51	16.4	114
49	Non-conventional Energy Sources for Green Synthesis in Water (Microwave, Ultrasound, and Photo) **2010**, 273		0
48	Green chemistry by nano-catalysis. *Green Chemistry*, **2010**, 12, 743	10	899
47	Suzuki-Miyaura cross-coupling reactions in aqueous media: green and sustainable syntheses of biaryls. *ChemSusChem*, **2010**, 3, 502-22	8.3	298
46	High-Surface-Area Silica Nanospheres (KCC-1) with a Fibrous Morphology. *Angewandte Chemie*, **2010**, 122, 9846-9850	3.6	65
45	High-surface-area silica nanospheres (KCC-1) with a fibrous morphology. *Angewandte Chemie - International Edition*, **2010**, 49, 9652-6	16.4	518
44	Cover Picture: High-Surface-Area Silica Nanospheres (KCC-1) with a Fibrous Morphology (Angew. Chem. Int. Ed. 50/2010). *Angewandte Chemie - International Edition*, **2010**, 49, 9539-9539	16.4	3
43	Nano-organocatalyst: magnetically retrievable ferrite-anchored glutathione for microwave-assisted Paal–Knorr reaction, aza-Michael addition, and pyrazole synthesis. *Tetrahedron*, **2010**, 66, 1091-1097	2.4	203
42	Nanoparticle-supported and magnetically recoverable ruthenium hydroxide catalyst: efficient hydration of nitriles to amides in aqueous medium. *Chemistry - A European Journal*, **2009**, 15, 1582-6	4.8	226
41	Silica-supported palladium: Sustainable catalysts for cross-coupling reactions. *Coordination Chemistry Reviews*, **2009**, 253, 2599-2626	23.2	438
40	Magnetically recoverable supported ruthenium catalyst for hydrogenation of alkynes and transfer hydrogenation of carbonyl compounds. *Tetrahedron Letters*, **2009**, 50, 1215-1218	2	80
39	Chapter 8:Environmentally Benign Chemical Synthesis via Mechanochemical Mixing and Microwave Irradiation. *RSC Green Chemistry*, **2009**, 275-292	0.9	3
38	Self-assembly of palladium nanoparticles: synthesis of nanobelts, nanoplates and nanotrees using vitamin B1, and their application in carbon–carbon coupling reactions. *Journal of Materials Chemistry*, **2009**, 19, 2026		108
37	Self-assembly of metal oxides into three-dimensional nanostructures: synthesis and application in catalysis. *ACS Nano*, **2009**, 3, 728-36	16.7	285
36	Nanoparticle-supported and magnetically recoverable nickel catalyst: a robust and economic hydrogenation and transfer hydrogenation protocol. *Green Chemistry*, **2009**, 11, 127-131	10	325
35	Nanoparticle-supported and magnetically recoverable palladium (Pd) catalyst: a selective and sustainable oxidation protocol with high turnover number. *Organic and Biomolecular Chemistry*, **2009**, 7, 37-40	3.9	244
34	Magnetic nanoparticle-supported glutathione: a conceptually sustainable organocatalyst. *Chemical Communications*, **2009**, 1837-9	5.8	186

33	Revisiting the Meerwein–Ponndorf–Verley reduction: a sustainable protocol for transfer hydrogenation of aldehydes and ketones. *Green Chemistry*, **2009**, 11, 1313	10	86
32	Microwave-Assisted Chemistry: a Rapid and Sustainable Route to Synthesis of Organics and Nanomaterials. *Australian Journal of Chemistry*, **2009**, 62, 16	1.2	149
31	Glutathione promoted expeditious green synthesis of silver nanoparticles in water using microwaves. *Green Chemistry*, **2009**, 11, 926	10	178
30	Greener and expeditious synthesis of bioactive heterocycles using microwave irradiation. *Pure and Applied Chemistry*, **2008**, 80, 777-790	2.1	101
29	The synthesis and applications of a micro-pine-structured nanocatalyst. *Chemical Communications*, **2008**, 6318-20	5.8	96
28	Aqueous microwave chemistry: a clean and green synthetic tool for rapid drug discovery. *Chemical Society Reviews*, **2008**, 37, 1546-57	58.5	375
27	Olefin ring closing metathesis and hydrosilylation reaction in aqueous medium by Grubbs second generation ruthenium catalyst. *Journal of Organic Chemistry*, **2008**, 73, 7417-9	4.2	49
26	Ring-fused aminals: catalyst and solvent-free microwave-assisted α-amination of nitrogen heterocycles. *Tetrahedron Letters*, **2008**, 49, 7165-7167	2	28
25	Pd–N-heterocyclic carbene (NHC) organic silica: synthesis and application in carbon–carbon coupling reactions. *Tetrahedron*, **2008**, 64, 4637-4643	2.4	73
24	Greener and rapid access to bio-active heterocycles: room temperature synthesis of pyrazoles and diazepines in aqueous medium. *Tetrahedron Letters*, **2008**, 49, 397-400	2	102
23	Greener and rapid access to bio-active heterocycles: one-pot solvent-free synthesis of 1,3,4-oxadiazoles and 1,3,4-thiadiazoles. *Tetrahedron Letters*, **2008**, 49, 879-883	2	93
22	Nafion® -catalyzed microwave-assisted Ritter reaction: an atom-economic solvent-free synthesis of amides. *Tetrahedron Letters*, **2008**, 49, 2661-2664	2	55
21	Microwave-assisted organic synthesis and transformations using benign reaction media. *Accounts of Chemical Research*, **2008**, 41, 629-39	24.3	543
20	Silica-supported Pd catalysts for Heck coupling reactions. *Tetrahedron*, **2007**, 63, 6949-6976	2.4	254
19	Palladium containing nanostructured silica functionalized with pyridine sites: a versatile heterogeneous catalyst for Heck, Sonogashira, and cyanation reactions. *Tetrahedron*, **2007**, 63, 6784-6790	2.4	95
18	Corrigendum to "Silica-supported Pd catalysts for Heck coupling reactions" [Tetrahedron 63 (2007) 6949]. *Tetrahedron*, **2007**, 63, 11223	2.4	16
17	Silica hybrid material containing Pd–NHC complex as heterogeneous catalyst for Mizoroki–Heck reactions. *Tetrahedron Letters*, **2007**, 48, 5363-5366	2	52
16	Polystyrene sulfonic acid catalyzed greener synthesis of hydrazones in aqueous medium using microwaves. *Tetrahedron Letters*, **2007**, 48, 5649-5652	2	43

15	Biginelli reaction in aqueous medium: a greener and sustainable approach to substituted 3,4-dihydropyrimidin-2(1H)-ones. *Tetrahedron Letters*, **2007**, 48, 7343-7346	2	82
14	An efficient and chemoselective Cbz-protection of amines using silica sulfuric acid at room temperature. *Tetrahedron Letters*, **2007**, 48, 8170-8173	2	34
13	Expeditious oxidation of alcohols to carbonyl compounds using iron(III) nitrate. *Tetrahedron Letters*, **2007**, 48, 8839-8842	2	47
12	Tandem bis-aza-Michael addition reaction of amines in aqueous medium promoted by polystyrenesulfonic acid. *Tetrahedron Letters*, **2007**, 48, 8735-8738	2	44
11	Tandem bis-aldol reaction of ketones: a facile one-pot synthesis of 1,3-dioxanes in aqueous medium. *Journal of Organic Chemistry*, **2007**, 72, 7420-2	4.2	77
10	Greener and sustainable approaches to the synthesis of pharmaceutically active heterocycles. *Current Opinion in Drug Discovery & Development*, **2007**, 10, 723-37		8
9	Highly Ordered Functional Organosilicas by Template-Directed Hydrolysis-Polycondensation of Chiral Camphorsulfonamide Precursors. *European Journal of Inorganic Chemistry*, **2006**, 2006, 3697-3702	2.3	32
8	Recent advances in thionating reagents for the synthesis of organosulfur compounds. *Journal of Sulfur Chemistry*, **2006**, 27, 353-386	2.3	40
7	Alumina encapsulated phosphorus pentasulfide (P4S10/Al2O3) mediated efficient thionation of long chain amides. *Tetrahedron Letters*, **2006**, 47, 2315-2317	2	23
6	Microwave enhanced chemistry of CsF elite: an efficient catalyst for the synthesis of esters, ethers and their thio-analogues. *Catalysis Communications*, **2005**, 6, 191-194	3.2	14
5	Thionation of carbonyl compounds using phosphorus pentasulfide and hexamethyldisiloxane under microwave irradiations. *Journal of Chemical Research*, **2004**, 2004, 474-476	0.6	8
4	Phosphorus Pentasulfide (P4S10). *Synlett*, **2004**, 2004, 2245-2246	2.2	14
3	A new, efficient and simple method for the thionation of ketones to thioketones using P4S10/Al2O3. *Tetrahedron Letters*, **2004**, 45, 6255-6257	2	36
2	CsF elite catalyzed regio- and chemoselective SN2 type ring opening of epoxides with thiol. *Catalysis Communications*, **2004**, 5, 515-518	3.2	39
1	A new reagent for the efficient synthesis of disulfides from alkyl halides. *Tetrahedron Letters*, **2003**, 44, 887-889	2	25