

Shyam Biswas

List of Publications by Year in descending order

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7,953
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9200
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#	ARTICLE	IF	CITATIONS
1	Synthesis of Metal-Organic Frameworks (MOFs): Routes to Various MOF Topologies, Morphologies, and Composites. <i>Chemical Reviews</i> , 2012, 112, 933-969.	23.0	3,923
2	New Functionalized Flexible Al-MIL-53-X (X = -Cl, -Br, -CH ₃ , -NO ₂) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 T Chemistry, 2011, 50, 9518-9526.	1.9	254
3	A General Strategy for the Synthesis of Functionalised UiO-66 Frameworks: Characterisation, Stability and CO ₂ Adsorption Properties. <i>European Journal of Inorganic Chemistry</i> , 2013, 2013, 2154-2160.	1.0	199
4	Enhanced selectivity of CO ₂ over CH ₄ in sulphonate-, carboxylate- and iodo-functionalized UiO-66 frameworks. <i>Dalton Transactions</i> , 2013, 42, 4730.	1.6	171
5	3D Luminescent Amide-Functionalized Cadmium Tetrazolate Framework for Selective Detection of 2,4,6-Trinitrophenol. <i>Crystal Growth and Design</i> , 2016, 16, 842-851.	1.4	167
6	p-Xylene-Selective Metal-Organic Frameworks: A Case of Topology-Directed Selectivity. <i>Journal of the American Chemical Society</i> , 2011, 133, 18526-18529.	6.6	159
7	A thiadiazole-functionalized Zr(IV)-based metal-organic framework as a highly fluorescent probe for the selective detection of picric acid. <i>CrystEngComm</i> , 2016, 18, 3104-3113.	1.3	141
8	A cubic coordination framework constructed from benzobistriazolate ligands and zinc ions having selective gas sorption properties. <i>Dalton Transactions</i> , 2009, , 6487.	1.6	120
9	A cerium-based metal-organic framework having inherent oxidase-like activity applicable for colorimetric sensing of biothiols and aerobic oxidation of thiols. <i>CrystEngComm</i> , 2017, 19, 5915-5925.	1.3	101
10	Cerium-based azide- and nitro-functionalized UiO-66 frameworks as turn-on fluorescent probes for the sensing of hydrogen sulphide. <i>CrystEngComm</i> , 2016, 18, 4374-4381.	1.3	95
11	A multi-responsive carbazole-functionalized Zr(IV)-based metal-organic framework for selective sensing of Fe(III), cyanide and p-nitrophenol. <i>Sensors and Actuators B: Chemical</i> , 2017, 250, 121-131.	4.0	94
12	Post-synthetic modification of a metal-organic framework with fluorescent-tag for dual naked-eye sensing in aqueous medium. <i>Sensors and Actuators B: Chemical</i> , 2017, 239, 759-767.	4.0	83
13	A highly stable dimethyl-functionalized Ce(IV)-based UiO-66 metal-organic framework material for gas sorption and redox catalysis. <i>CrystEngComm</i> , 2016, 18, 7855-7864.	1.3	80
14	New Functionalized Metal-Organic Frameworks MIL-47-X (X = Cl, Br, CH ₃) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Adsorption Properties. <i>Journal of Physical Chemistry C</i> , 2013, 117, 22784-22796.	1.5	79
15	Metal-Organic Framework (MOF) Derived Recyclable, Superhydrophobic Composite of Cotton Fabrics for the Facile Removal of Oil Spills. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 8563-8573.	4.0	78
16	Fuel purification, Lewis acid and aerobic oxidation catalysis performed by a microporous Co-BTT (BTT ³⁻ = 1,3,5-benzenetristetrazolate) framework having coordinatively unsaturated sites. <i>Journal of Materials Chemistry</i> , 2012, 22, 10200.	6.7	75
17	A dinitro-functionalized Zr(IV)-based metal-organic framework as colorimetric and fluorogenic probe for highly selective detection of hydrogen sulphide. <i>Sensors and Actuators B: Chemical</i> , 2017, 245, 1039-1049.	4.0	74
18	New V ^{IV} -Based Metal-Organic Framework Having Framework Flexibility and High CO ₂ Adsorption Capacity. <i>Inorganic Chemistry</i> , 2013, 52, 113-120.	1.9	68

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19	Metal-Organic Framework Showing Selective and Sensitive Detection of Exogenous and Endogenous Formaldehyde. <i>Inorganic Chemistry</i> , 2018, 57, 15149-15157.	1.9	67
20	Partially fluorinated MIL-47 and Al-MIL-53 frameworks: influence of functionalization on sorption and breathing properties. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 3552.	1.3	63
21	A dinitro-functionalized metal-organic framework featuring visual and fluorogenic sensing of H ₂ S in living cells, human blood plasma and environmental samples. <i>Analyst</i> , 2018, 143, 1482-1491.	1.7	61
22	The effect of functional groups in the aqueous-phase selective sensing of Fe(III) ions by thienothiophene-based zirconium metal-organic frameworks and the design of molecular logic gates. <i>Dalton Transactions</i> , 2018, 47, 1159-1170.	1.6	59
23	A new quinoline based luminescent Zr(IV) metal-organic framework for the ultrasensitive recognition of 4-nitrophenol and Fe(III) ions. <i>Dalton Transactions</i> , 2018, 47, 14696-14705.	1.6	59
24	Vanadium metal-organic frameworks: structures and applications. <i>New Journal of Chemistry</i> , 2014, 38, 1853-1867.	1.4	57
25	Rapid and highly sensitive detection of extracellular and intracellular H ₂ S by an azide-functionalized Al(III)-based metal-organic framework. <i>Dalton Transactions</i> , 2017, 46, 12856-12864.	1.6	57
26	A dual functional MOF-based fluorescent sensor for intracellular phosphate and extracellular 4-nitrobenzaldehyde. <i>Dalton Transactions</i> , 2019, 48, 1332-1343.	1.6	56
27	Extraordinary sensitivity for H ₂ S and Fe(III) sensing in aqueous medium by Al-MIL-53-N ₃ metal-organic framework: <i>in vitro</i> and <i>in vivo</i> applications of H ₂ S sensing. <i>Dalton Transactions</i> , 2018, 47, 2690-2700.	1.6	53
28	Highly Active Urea-Functionalized Zr(IV)-UiO-67 Metal-Organic Framework as Hydrogen Bonding Heterogeneous Catalyst for Friedel-Crafts Alkylation. <i>Inorganic Chemistry</i> , 2019, 58, 5163-5172.	1.9	51
29	Selective and Sensitive Sensing of Hydrogen Peroxide by a Boronic Acid Functionalized Metal-Organic Framework and Its Application in Live-Cell Imaging. <i>Inorganic Chemistry</i> , 2018, 57, 14574-14581.	1.9	49
30	A new 3D luminescent Zn(II)-metal-organic framework containing a quinoline-2,6-dicarboxylate linker for the highly selective sensing of Fe(III) ions. <i>Dalton Transactions</i> , 2019, 48, 1766-1773.	1.6	49
31	Vanadium Analogues of Nonfunctionalized and Amino-Functionalized MOFs with MIL-101 Topology: Synthesis, Characterization, and Gas Sorption Properties. <i>European Journal of Inorganic Chemistry</i> , 2012, 2012, 2481-2486.	1.0	48
32	A highly catalytically active Hf(IV) metal-organic framework for Knoevenagel condensation. <i>Microporous and Mesoporous Materials</i> , 2019, 284, 459-467.	2.2	47
33	Aqueous Phase Sensing of Fe ³⁺ and Ascorbic Acid by a Metal-Organic Framework and Its Implication in the Construction of Multiple Logic Gates. <i>Chemistry - an Asian Journal</i> , 2019, 14, 2822-2830.	1.7	44
34	Syntheses and Magnetostructural Investigations on Kuratowski-Type Homo- and Heteropentanuclear Coordination Compounds [M ₄ Zn ₄ Cl ₄ (L) ₆](M ^{II} = Zn, Fe) <i>TJ ETO 00 00 rg BT / Overloc</i> Nonplanar <i>K</i> _{3,3} Graph. <i>Inorganic Chemistry</i> , 2010, 49, 7424-7434.	1.9	43
35	A Pyrene-Functionalized Metal-Organic Framework for Nonenzymatic and Ratiometric Detection of Uric Acid in Biological Fluid via Conformational Change. <i>Inorganic Chemistry</i> , 2019, 58, 5654-5663.	1.9	42
36	A functionalized UiO-66 MOF for turn-on fluorescence sensing of superoxide in water and efficient catalysis for Knoevenagel condensation. <i>Dalton Transactions</i> , 2019, 48, 17371-17380.	1.6	40

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37	A recyclable post-synthetically modified Al(<i>iii</i>) based metal-organic framework for fast and selective fluorogenic recognition of bilirubin in human biofluids. Dalton Transactions, 2019, 48, 9266-9275.	1.6	38
38	Comparison of different solid adsorbents for the removal of mobile pesticides from aqueous solutions. Adsorption, 2015, 21, 243-254.	1.4	37
39	The flexibility of modified-linker MIL-53 materials. Dalton Transactions, 2016, 45, 4162-4168.	1.6	37
40	Sorption and breathing properties of difluorinated MIL-47 and Al-MIL-53 frameworks. Microporous and Mesoporous Materials, 2013, 181, 175-181.	2.2	36
41	Homo- and Heteropentanuclear Coordination Compounds with <i>T_d</i> Symmetry: the Solid State Structures of [MZn ₄ (L) ₄ (L ²) ₆] (M = Co ^{II} or Ti ^{IV})	1.0	32
42	Synthesis, characterization and sorption properties of functionalized Cr-MIL-101-X (X = F, Cl, Br, I)	1.4	32
43	Post-synthetic modification of a metal-organic framework with a chemodosimeter for the rapid detection of lethal cyanide via dual emission. Dalton Transactions, 2020, 49, 8684-8692.	1.6	32
44	Selective Sensing of Peroxynitrite by Hf-Based UiO-66-B(OH) ₂ Metal-Organic Framework: Applicability to Cell Imaging. Inorganic Chemistry, 2018, 57, 10128-10136.	1.9	31
45	An ultra-robust luminescent CAU-10 MOF acting as a fluorescent "turn-off" sensor for Cr ₂ O ₇ ²⁻ in aqueous medium. Inorganica Chimica Acta, 2019, 497, 119078.	1.2	31
46	A vinyl functionalized mixed linker CAU-10 metal-organic framework acting as a fluorescent sensor for the selective detection of H ₂ S and palladium(II). Microporous and Mesoporous Materials, 2020, 293, 109790.	2.2	31
47	Congo red decomposition by photocatalytic formation of hydroxyl radicals (\cdot OH) using titanium metal-organic frameworks. Transition Metal Chemistry, 2019, 44, 77-87.	0.7	30
48	A fluorescent zirconium organic framework displaying rapid and nanomolar level detection of Hg(II) and nitroantibiotics. Inorganic Chemistry Frontiers, 2022, 9, 859-869.	3.0	30
49	Facile synthesis and gas adsorption behavior of new functionalized Al-MIL-101-X (X = CH ₃ , NO ₂)	2.2	29
50	Fluorogenic naked-eye sensing and live-cell imaging of cyanide by a hydrazine-functionalized CAU-10 metal-organic framework. CrystEngComm, 2018, 20, 4194-4201.	1.3	29
51	Influence of Hydrogen Bond Donating Sites in UiO-66 Metal-Organic Framework for Highly Regioselective Methanolysis of Epoxides. ChemCatChem, 2020, 12, 1789-1798.	1.8	27
52	A pyrazine core-based luminescent Zr(IV) organic framework for specific sensing of Fe ³⁺ , picric acid and Cr ₂ O ₇ ²⁻ . CrystEngComm, 2019, 21, 6252-6260.	1.3	26
53	A Zr-Based Metal-Organic Framework with a DUT-52 Structure Containing a Trifluoroacetamido-Functionalized Linker for Aqueous Phase Fluorescence Sensing of the Cyanide Ion and Aerobic Oxidation of Cyclohexane. Inorganic Chemistry, 2021, 60, 4539-4550.	1.9	26
54	A functionalized UiO-66 MOF acting as a luminescent chemosensor for selective and sensitive turn-on detection of superoxide and acetylacetone. Microporous and Mesoporous Materials, 2021, 323, 111251.	2.2	26

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55	Nonanuclear Coordination Compounds Featuring $\{M_{9}L_{12}\}_{6+}$ Cores (M = Ni ^{II} , Co ^{II} , or Zn ^{II} ; L = 1,2,3-Benzotriazolate). <i>European Journal of Inorganic Chemistry</i> , 2009, 2009, 3094-3101.	1.0	24
56	Specific fluorescence sensing of hydrogen sulphide by an azide functionalized Zr(IV) MOF with DUT-52 topology. <i>Microporous and Mesoporous Materials</i> , 2021, 311, 110725.	2.2	22
57	Rapid switch-on fluorescent detection of nanomolar-level hydrazine in water by a diacetoxy-functionalized MOF: application in paper strips and environmental samples. <i>Dalton Transactions</i> , 2020, 49, 12565-12573.	1.6	21
58	A diamino functionalized metal-organic framework for fluorometric recognition of free chlorine in environmental water samples. <i>Microporous and Mesoporous Materials</i> , 2020, 299, 110116.	2.2	21
59	Two birds with one arrow: a functionalized Al(III) MOF acts as a fluorometric sensor of dopamine in bio-fluids and a recyclable catalyst for the Biginelli reaction. <i>Journal of Materials Chemistry C</i> , 2022, 10, 6717-6727.	2.7	21
60	Superhydrophobic Self-Cleaning Composite of a Metal-Organic Framework with Polypropylene Fabric for Efficient Removal of Oils from Oil-Water Mixtures and Emulsions. <i>ACS Applied Nano Materials</i> , 2022, 5, 10003-10014.	2.4	21
61	Catalytic Performance of Vanadium MIL-47 and Linker-Substituted Variants in the Oxidation of Cyclohexene: A Combined Theoretical and Experimental Approach. <i>ChemPlusChem</i> , 2014, 79, 1183-1197.	1.3	20
62	Fluorescence Modulation of an Aggregation-Induced Emission Active Ligand via Rigidification in a Coordination Polymer and Its Application in Singlet Oxygen Sensing. <i>Crystal Growth and Design</i> , 2019, 19, 6388-6397.	1.4	20
63	Synthesis, Characterization, Stability, and Gas Adsorption Characteristics of a Highly Stable Zirconium Mesaconate Framework Material. <i>European Journal of Inorganic Chemistry</i> , 2015, 2015, 3317-3322.	1.0	19
64	Aqueous-Phase Nanomolar Detection of Dichromate by a Recyclable Cd(II) Metal-Organic Framework. <i>Crystal Growth and Design</i> , 2021, 21, 2680-2689.	1.4	19
65	Dioxygen activation in photooxidation of diphenylmethane by a dioxomolybdenum(VI) complex anchored covalently onto mesoporous titania. <i>Transition Metal Chemistry</i> , 2013, 38, 119-127.	0.7	18
66	Gas sorption and transition-metal cation separation with a thienothiophene based zirconium metal-organic framework. <i>Journal of Solid State Chemistry</i> , 2015, 232, 221-227.	1.4	17
67	Thermal spin-crossover in the [M ₃ Zn ₆ Cl ₆ L ₁₂] (M = Zn, FeII; L = 5,6-dimethoxy-1,2,3-benzotriazolate) system: structural, electrochemical, Mössbauer, and UV-Vis spectroscopic studies. <i>Dalton Transactions</i> , 2010, 39, 9851.	1.6	16
68	A Thiophene-2-carboxamide-Functionalized Zr(IV) Organic Framework as a Prolific and Recyclable Heterogeneous Catalyst for Regioselective Ring Opening of Epoxides. <i>Inorganic Chemistry</i> , 2019, 58, 16581-16591.	1.9	16
69	Highly Active Bisamino Functionalized Zr(IV)-UiO-67 Metal-Organic Framework for Cascade Catalysis. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 2830-2834.	1.0	15
70	A phthalimide-functionalized UiO-66 metal-organic framework for the fluorogenic detection of hydrazine in live cells. <i>Dalton Transactions</i> , 2019, 48, 12615-12621.	1.6	14
71	A Metal-Organic Framework with Allyloxy Functionalization for Aqueous-Phase Fluorescence Recognition of Pd(II) Ion. <i>European Journal of Inorganic Chemistry</i> , 2021, 2021, 3846-3851.	1.0	14
72	Rapid recognition of fatal cyanide in water in a wide pH range by a trifluoroacetamido based metal-organic framework. <i>New Journal of Chemistry</i> , 2021, 45, 20193-20200.	1.4	14

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73	Diamino group-functionalized Zr-based metal-organic framework for fluorescence sensing of free chlorine in the aqueous phase and Knoevenagel condensation. Dalton Transactions, 2022, 51, 6964-6975.	1.6	14
74	A self-cleaning hydrophobic MOF-based composite for highly efficient and recyclable separation of oil from water and emulsions. Materials Chemistry Frontiers, 2022, 6, 2051-2060.	3.2	14
75	Zr(IV) and Ce(IV)-based metal-organic frameworks incorporating 4-carboxycinnamic acid as ligand: Synthesis and properties. Microporous and Mesoporous Materials, 2017, 237, 275-281.	2.2	13
76	A hydrazine functionalized UiO-66(Hf) metal-organic framework for the synthesis of quinolines via Friedl-nder condensation. New Journal of Chemistry, 2020, 44, 10982-10988.	1.4	13
77	Improved Synthesis of a Zirconium(IV) Muconate Metal-Organic Framework: Characterization, Stability and Gas Sorption Properties. European Journal of Inorganic Chemistry, 2015, 2015, 2463-2468.	1.0	11
78	An Anthracene-Based Metal-Organic Framework for Selective Photo-Reduction of Carbon Dioxide to Formic Acid Coupled with Water Oxidation. Chemistry - A European Journal, 2021, 27, 4098-4107.	1.7	11
79	Ultrafast and nanomolar level detection of H ₂ S in aqueous medium using a functionalized UiO-66 metal-organic framework based fluorescent chemosensor. Dalton Transactions, 2021, 50, 11631-11639.	1.6	11
80	An acetoxy functionalized Al(III) based metal-organic framework showing selective turn-on-detection of perborate in environmental samples. Dalton Transactions, 2020, 49, 17612-17620.	1.6	10
81	Sulfonic acid functionalized zirconium-based metal-organic framework for the selective detection of copper(II) ions. New Journal of Chemistry, 2022, 46, 10477-10483.	1.4	10
82	Amino Group Functionalized Hf-Based Metal-Organic Framework for Knoevenagel-Doebner Condensation. European Journal of Inorganic Chemistry, 2021, 2021, 3396-3403.	1.0	8
83	Rational design of a functionalized aluminum metal-organic framework as a turn-off fluorescence sensor for L-ketoglutaric acid. Dalton Transactions, 2020, 49, 16928-16934.	1.6	7
84	Structural Diversity in Supramolecular Organization of Anionic Phosphate Monoesters: Role of Cations. ACS Omega, 2019, 4, 2118-2133.	1.6	6
85	A functionalized UiO-66 metal-organic framework acting as a fluorescent based selective sensor of hydrazine in aqueous medium. Microporous and Mesoporous Materials, 2022, 329, 111552.	2.2	6
86	Friedel-Crafts alkylation reaction efficiently catalyzed by a di-amide functionalized Zr(IV) metal-organic framework. Molecular Catalysis, 2022, 517, 112007.	1.0	6
87	A Cd(II)-organic framework as a highly sensitive and rapid fluorometric sensor for ascorbic acid in aqueous medium. CrystEngComm, 2022, 24, 4723-4730.	1.3	6
88	Two 3D Coordination Frameworks Based on Benzobisimidazole Linkers Generated under Similar Conditions: Synthesis, Structures and Thermal Properties. European Journal of Inorganic Chemistry, 2014, 2014, 5362-5369.	1.0	3
89	Fluorogenic naked eye turn-on-sensing of hypochlorous acid by a Zr-based metal organic framework. New Journal of Chemistry, 2021, 45, 14211-14217.	1.4	3
90	Nanomolar level fluorogenic detection of cyanide with an amide functionalized zirconium metal-organic framework and its application in real-world cyanide monitoring. European Journal of Inorganic Chemistry, 0, , .	1.0	3