

Porphyrin and phthalocyanine-based Metal Organic Frameworks beyond metal-carboxylates

Supplementary Information

Chemical formula and CSD entry code of reported porphyrin and phthalocyanine-based Metal Organic Frameworks (based on non-carboxylate linkers)

[a] Porph-MOFs based on tetra(4-sulfonatophenyl)porphyrin ligand (Sulfonate ligand, TSPP)

• DIBJEF	[Eu ₆ (μ ₃ -OH) ₈ (H ₂ O) ₂](H ₂ TSPP) ₃ ·2H ₂ O
• DIBJIJ	[Eu ₆ (μ ₆ -O)(μ ₃ -OH) ₈ (H ₂ O) ₁₄](H ₂ TSPP) ₂
• PUFNUB	[Sm(H ₂ TSPP)](H ₃ O) _n ·H ₂ O
• SUBGIH	[Tb(CoTSPP)](H ₃ O) _n ·2H ₂ O
• UQUCUG	[Gd(H ₂ TSPP)](H ₃ O) _n ·nH ₂ O
• WADHUH	[Er(VTSP)H ₂ O] _n
• WADJAP	[Tb(VTSP)H ₂ O] _n
• WADJET	[Dy(VTSP)H ₂ O] _n
• XUGWAZ	[Dy(H ₂ TSPP)](H ₃ O) _n ·2H ₂ O
• YIVWIL	[Eu(ZnTSPP)](H ₃ O) _n
• LIFWEF	[DyZn(TSPP)H ₃ O] _n
• FASGEO	[SmZn(TSPP)H ₃ O] _n ·2nH ₂ O
• CUNFID	[Nd(TSPP)] _n ·nH ₃ O
• ABEFUL	[Tb(H ₂ TSPP)](H ₃ O) _n
• RALZAH	[Sm(VOTSP)H ₃ O] _n
• RALZEL	[Sm(VOTSP)H ₃ O] _n ·2N ₂
• HIYBEY	[Tb(ZnTSPP)](H ₃ O) _n
• FASGIS	[Tb(H ₂ O) ₃ (CoTSPP)](H ₃ O) _n
• FARXUU	[Sm(Histidine)(H ₂ O)][Sm(H ₃ O) ₃ (H ₂ TSPP) ₂]·5H ₂ O
• BIJFIM	{[Co(TSPP)] ₂ [Sm(Histidine)(H ₂ O)][Sm(H ₃ O) ₃]} _n ·nH ₂ O
• BIJFOS	{[Co(TSPP)] ₂ [Eu(Histidine)(H ₂ O)][Eu(H ₃ O) ₃]} _n ·nH ₂ O
• BIJFUY	{[Co(TSPP)] ₂ [Dy(Histidine)(H ₂ O)][Dy(H ₃ O) ₃]} _n ·nH ₂ O
• KAWQOR	[Cu ₁₂ (1,3,5-btc) ₈ (C ₄₄ H ₂₄ N ₄ Fe)(S)] _n ; (S = DMA or H ₂ O, btc = benzenetricarboxylate)
• KAWQIL	[Zn ₂₄ (1,3,5-btc) ₁₄ (C ₄₄ H ₂₄ N ₄ Fe) ₂ (S)] _n ; (S = DMA or H ₂ O, btc = benzenetricarboxylate)
• ZEVZIM	{[Gd(Histidine)(H ₂ O)][Gd(H ₃ O) ₃](H ₂ TSPP) ₂ }] _n ·3 nH ₂ O
• FASGAK	[La(TSPP)] _n ·nH ₅ O ₂
• FASFOX	[Sm(TSPP)] _n ·nH ₅ O ₂
• FASFUD	[Eu(TSPP)] _n ·nH ₅ O ₂
• GOMFOF	(C ₄₄ H ₂₄ K ₂ N ₄ Na ₄ O ₁₂ Pd ₁ S ₄) _n

[b] Porph-MOFs based on tetra(4-phosphonatophenyl)porphyrin ligand (Phosphonate ligand, TPPP)

• SOCPEI	[Zn ₃ (Ni-H ₃ TPPP) ₃ ·9(CH ₃) ₂ NH ₂ ·3DMF·17H ₂ O]
• LELQOL	[M ^{II} (Ni-H ₆ TPPP)(H ₂ O)]; (M= Mn, Co, Ni, Cd)
• VIBFAQ	[M ₂ (Ni-H ₂ TPPP)(OH/F) ₂]·xH ₂ O; (M = Zr, Hf)
• HIQDUJ	[Co ₂ (Ni-H ₄ TPPP)]·2DABCO·6H ₂ O
• COQKEB	[Na ₂ Cu(H ₄ TPPP)]·(NH ₂ (CH ₃) ₂)
• SAHDEO	[Zn ₃ (Ni-H ₂ -metaTPPP)(Ni-H ₄ -metaTPPP)(Ni-H ₅ -metaTPPP)·7(CH ₃) ₂ NH ₂ ·DMF·7H ₂ O]

[c] MOFs based on phthalocyanine ligand (Octahydroxy phthalocyanine ligand, TCatPc)

• IHULEF	[Fe ₆ (OH ₂) ₄ (CoTCatPc) ₃]·[Fe ₃ (OH) ₃ (OH ₂) ₂]
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[d] MOFs based on tetra (3,4,5-trihydroxyphenyl)porphyrin ligand (Gallate ligand, TGalPP)

• PEBWEB	{Zr ₂ (H ₆ -TGalPP)}·(DMA) _n (H ₂ O) _n
• PEBWIF	{RE ₂ (H ₆ -TGalPP)}·(DMA) _n (H ₂ O) _n ; (RE(III) = Y, La, Ce)

[e] MOF based on di(3,4,5-trihydroxyphenyl)porphyrin porphyrin) ligand (Gallate ligand, DGalPP)

- YUJKIA $\{Zr(DGalPP)\}_2 \cdot O_2$

[f] MOF based on tetra (4-tetrazolyphenyl)porphyrin ligand (Tetrazolate ligand, TTzPP)

- DOZCEC $[Mn^{II}_{4.5}Cl(Mn^{III}CITzPP)_2(H_2O)_4] \cdot (DEF)_{20} \cdot (CH_3OH)_{18} \cdot (H_2O)_{12}$
- UQOFEN $Cd_{0.5}[(Cd_4Cl)(TTzPP)_2(CdCl)_4] \cdot Solv$ (Solv = DMA, MeOH or H₂O)
- UQOFEN01 $[(Cd_4Cl)(TTzPP)_2(CdCl)_4] \cdot Solv$ (Solv = DMA, MeOH or H₂O)
- UQOFIR $[(Cd_{2.5}Cl)(H_2TTzPP)_2(CdCl)_4] \cdot Solv$ (Solv = DMA, MeOH or H₂O)
- UQODUB $[(Cd_3Cl)(TTzPP)_2(CdCl)_4] \cdot Solv$ (Solv = DMA, MeOH or H₂O)
- UQOFAJ $Na_2[(Cd_{3.5}Cl)(TTzPP)_2(CdCl)_4] \cdot Solv$ (Solv = DMA, MeOH or H₂O)
- UQOFOX $Mn_{0.4}[(Mn_{0.5}Cl)(H_2TTzPP)_2(MnCl)_4] \cdot Solv$ (Solv = DMA, MeOH or H₂O)
- DAMRER $[Fe^{II}pzTTzPP(Fe^{II}_{1-x}DMF_{1-x}Fe^{III}_xOH_x)]$ ($x \geq 0.25$)
- DAMRAN $[Fe^{II}DABCOTTzTP(Fe^{II}_{1-x}DMF_{1-x}Fe^{III}_xOH_x)]_n$ (DABCO = 1,4-diazabicyclo(2.2.2)octane)
- FINCIR $[Cu_{4.5}((H_4TTzPP)(TTzPP)Cl_2)(H_2O)_{0.5}] \cdot CH_3NH_2CH_3 \cdot 7EtOH \cdot 8H_2O$

[g] MOF based on tetra(1H-pyrazol-4-yl)porphyrin ligand (Pyrazolate ligand, TPzP)

- MALMAQ $[Ni_8(OH)_4(H_2O)_2](NiTPzP)_3$

[h] MOF based on tetra(1H-pyrazol-4-yl)phenyl porphyrin ligand (Pyrazolate ligand, TPzPP)

- BALNAG $[Ni_8(OH)_4(H_2O)_2](NiTPzPP)_3$