Electronic Supplementary Information

A luminescent neutral cadmium(II)-boron(III)-imidazolate framework with *sql* net

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Synthesis of [CdBrB(im)$_4$] (BIF-35): the mixture of cadmium acetate dihydrate (0.0672g), KB(im)$_4$ (0.0722g), tetramethylammonium bromide (0.0752g), piperazine (0.0242g), ethyleneurea (0.1812g), dimethylformamide (2.5ml) and distilled water (0.5 ml) was sealed in 20 mL vial and kept at 100 ^{o}C for 4 days. After cooling to room-temperature, the colourless crystals were obtained in pure phase (Yield: 30%). Anal. Calcd for **BIF-35**, $C_{12}H_{12}N_8BBrCd$ (471.42): C, 30.57; H, 2.56; N, 23.76. Found: C, 31.02; H, 2.78; N, 24.14.

Powder X-ray Diffraction Studies

The Powder X-ray diffraction (PXRD) patterns were collected on a MiniFlex-II diffractometer diffractometer with Cu Kα radiation (λ = 1.54056 Å) with a step size of 0.05°. The 2-theta angular range is from 8 to 50 degrees.

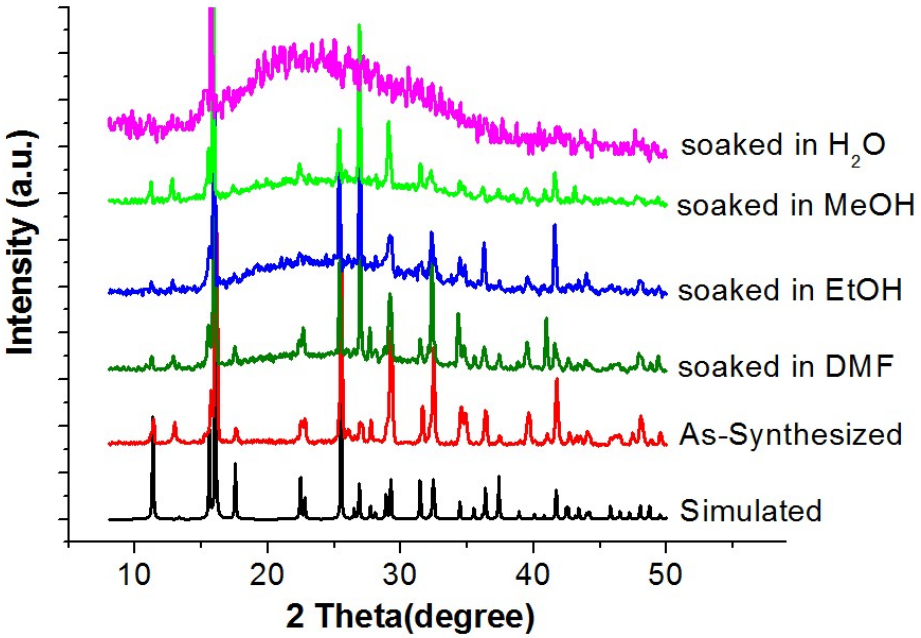

Fig. S1 The Powder XRD patterns of **BIF-35** and the samples soaked in DMF, EtOH, MeOH, H_2O for 30 min, respectively.

Themogravimetric Analysis of BIF-35

Themogravimetric (TG) analysis was carried out on a NETSCHZ STA-449C thermoanalyzer with a heating rate of 10 °C/min under nitrogen gas atmosphere. The temperature range is 25 to 600 °C

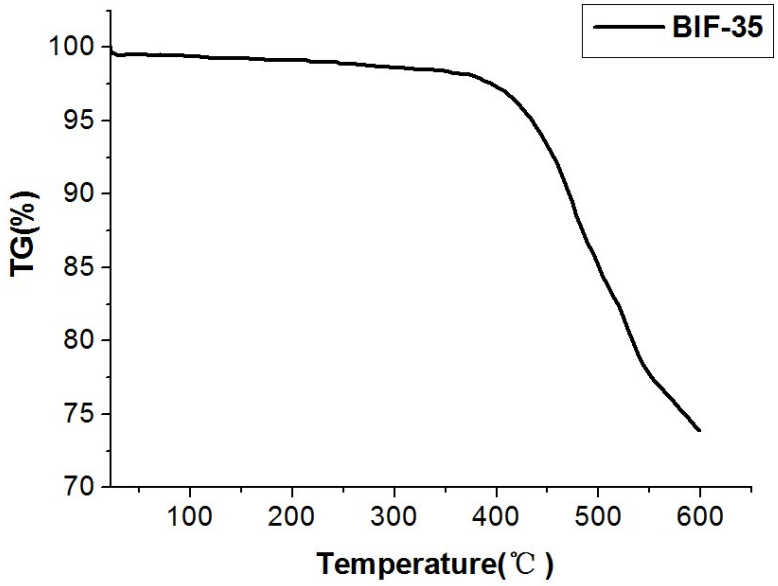

Fig. S2 The TGA diagram of **BIF-35**.

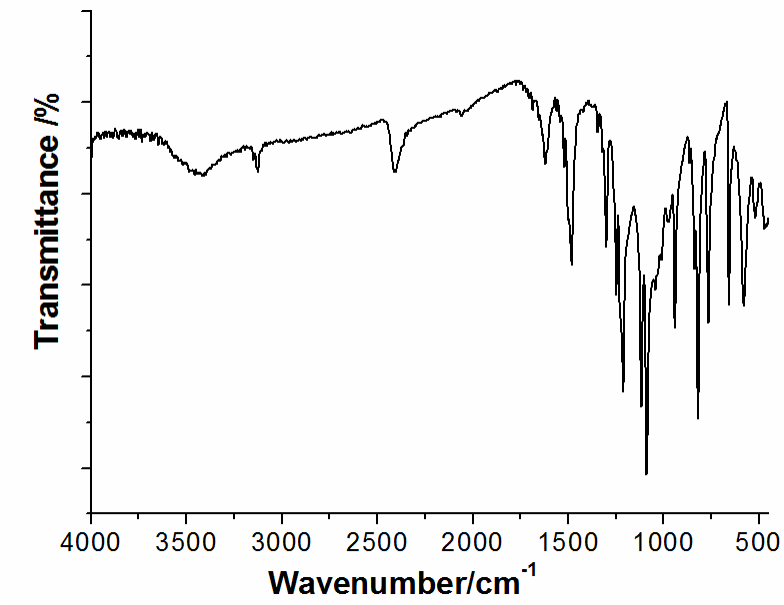

Fig. S3 The FT-IR (KBr) spectrum of as-synthesized **BIF-35** at room temperature. IR (KBr, cm^{-1}): 3412(w), 3134(w), 2406(w), 1613(w), 1482(m), 1209(s), 1085(s), 938(m), 818(s), 764(m), 654(m), 576(m).