Supporting Information for

New 3-D polyoxovanadoborate architectures based on $[V_{12}B_{18}O_{60}]^{16-}$ clusters

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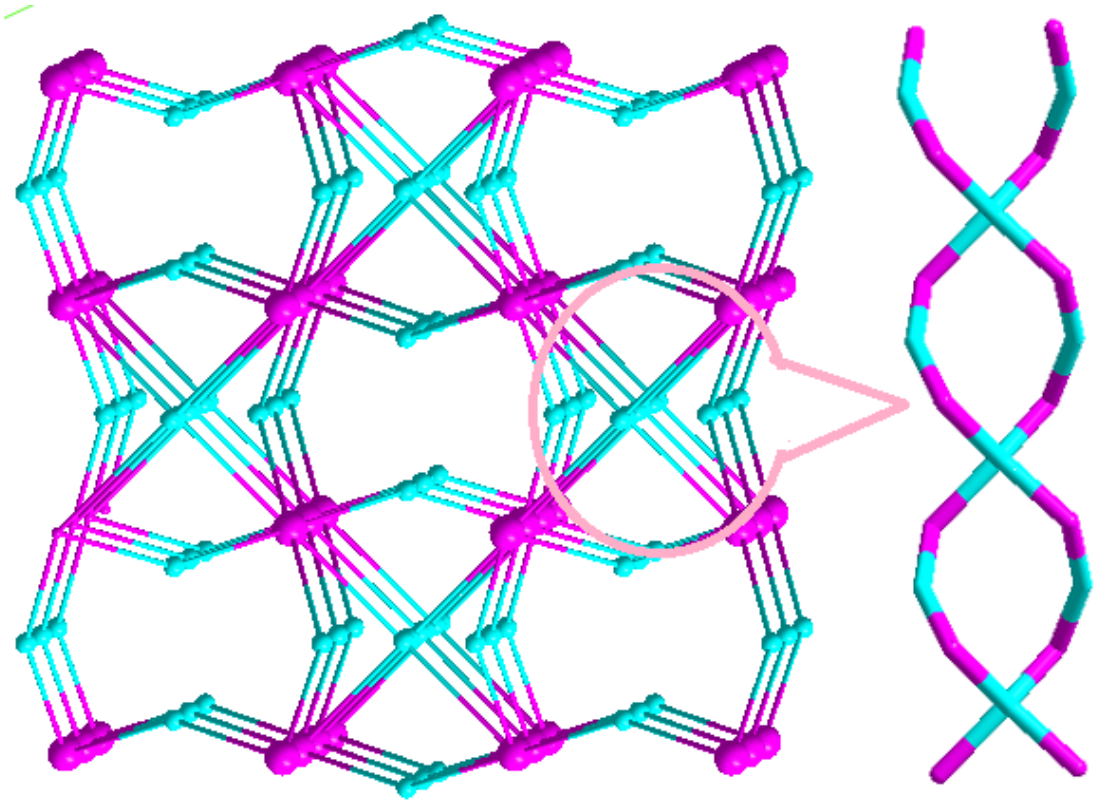


Fig. S1 View of the 3-D simplified framework of **2**, showing the helical channels.

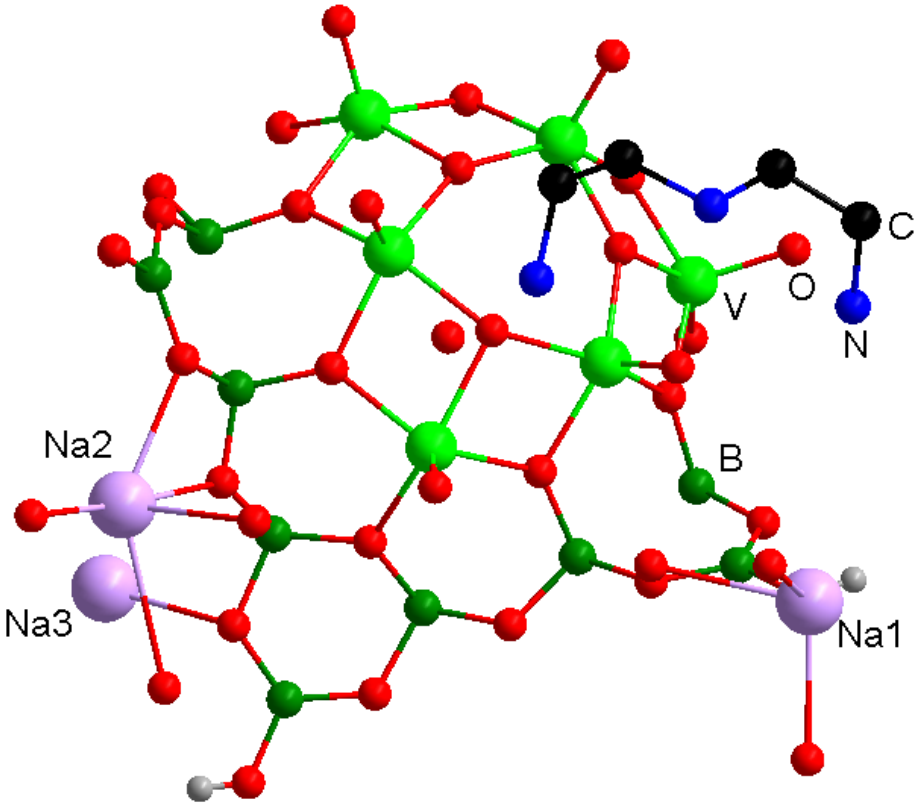


Fig. S2 The asymmetric unit of **3** (all H atoms have been omitted for clarity).

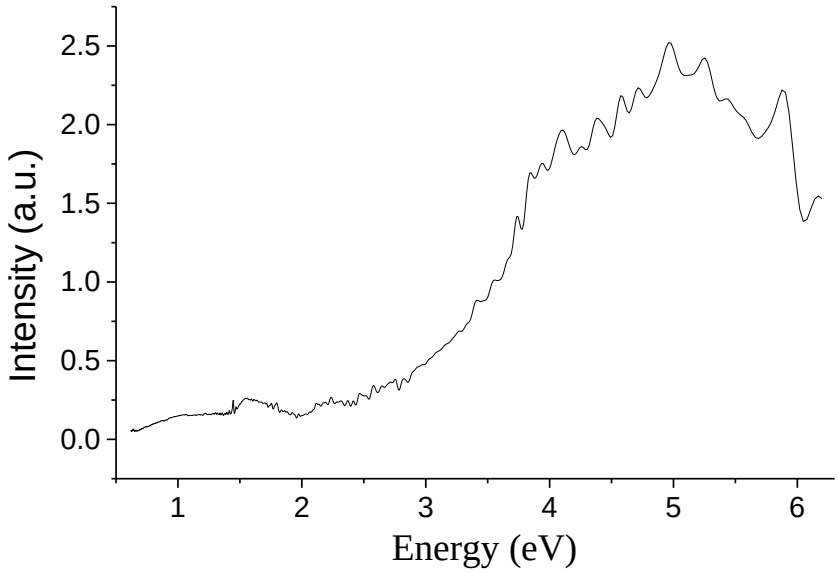


Fig. S3 The diffuse-reflectance spectrum of **2**.

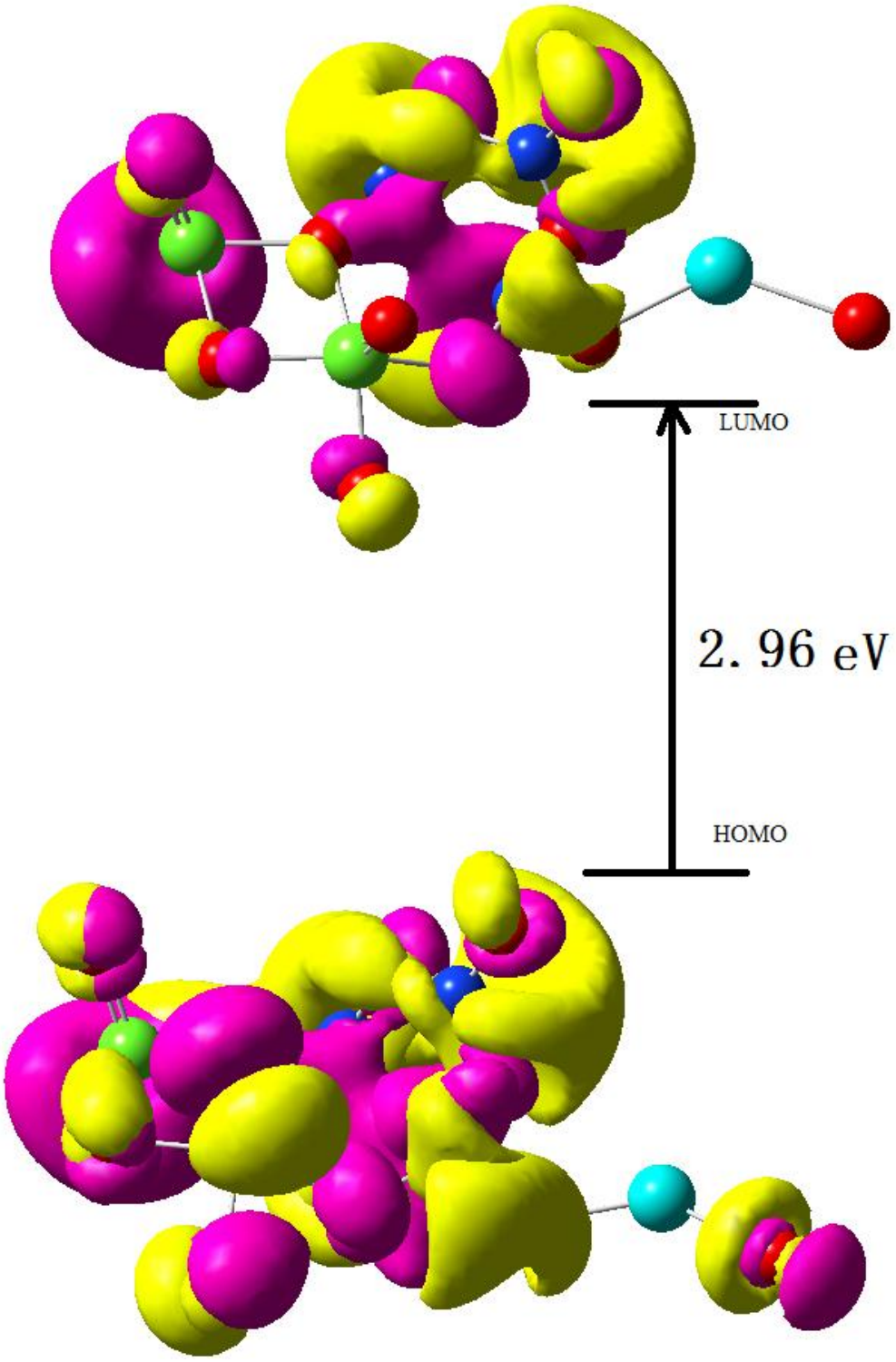
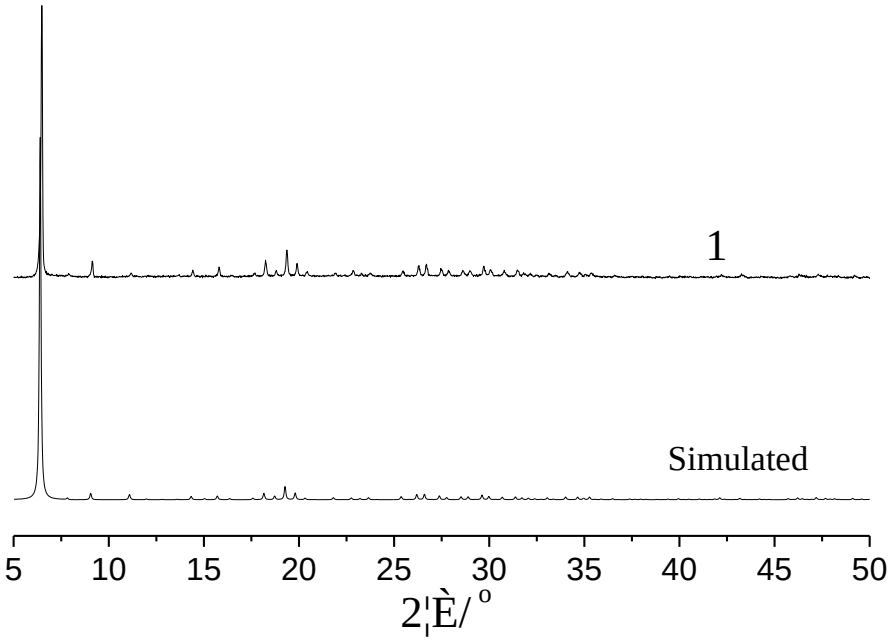
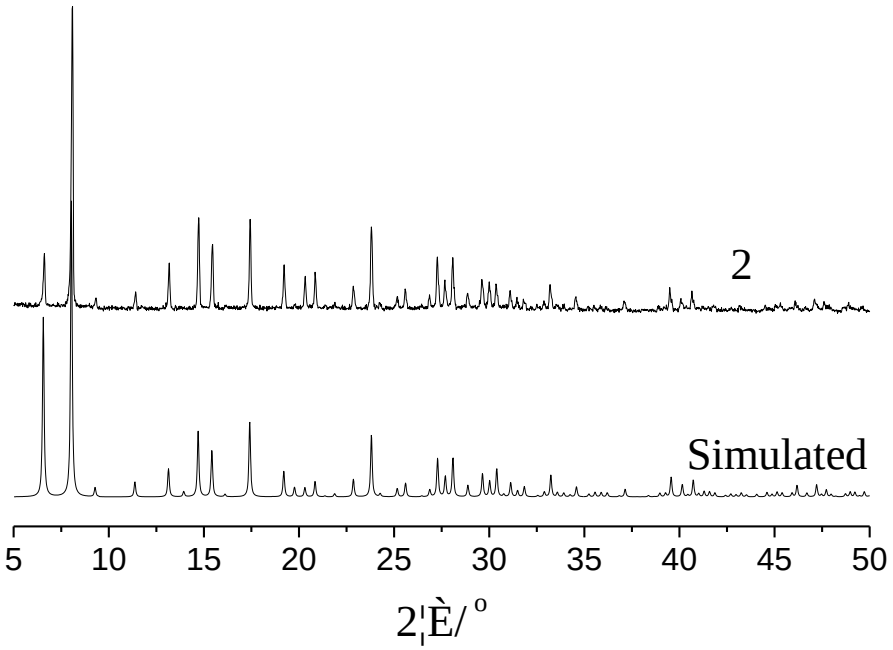


Fig. S4 Contour plots and orbital gaps of frontier orbital for [$CdB_3V_2O_{11}$] species.





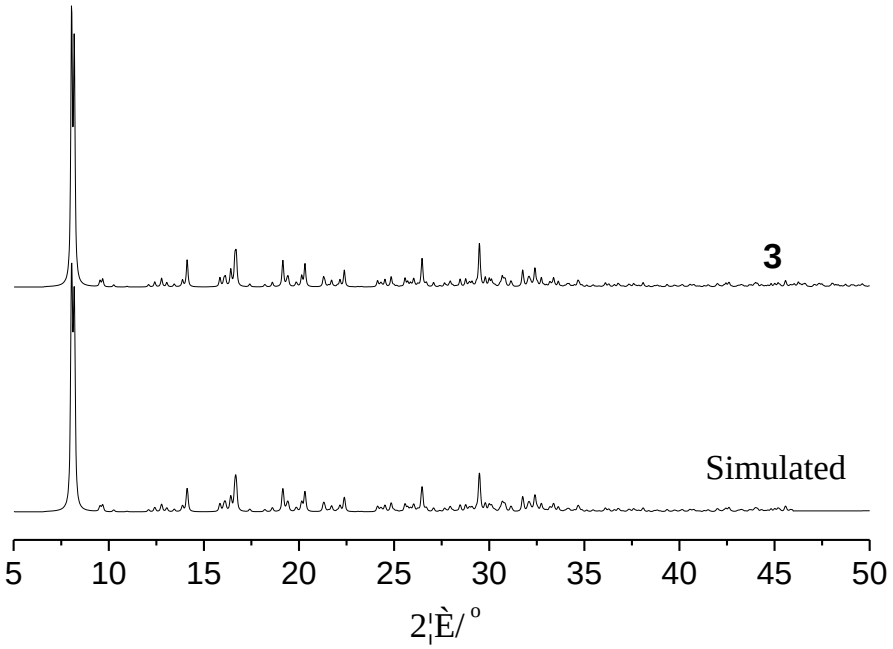


Fig. S4 Simulated and experimental powder XRD patterns of **1 - 3**.

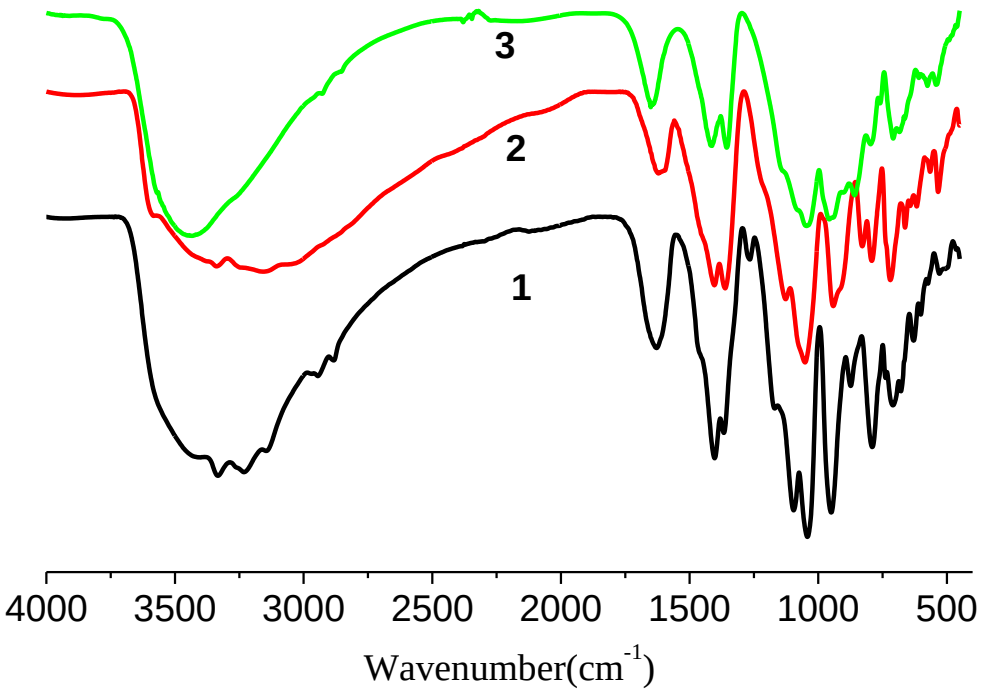


Fig. S5 IR spectra of **1**-**2**.

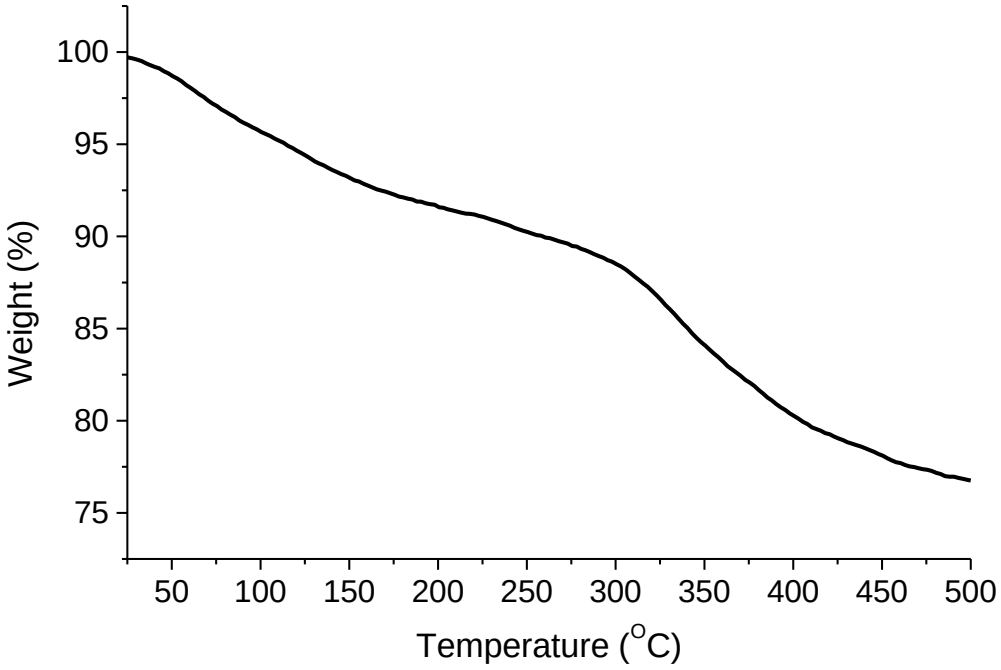


Fig. S6 TG curve of **1**.

As shown in Fig. S6, a two-step weight loss occurs in the range of 25-475 ^{o}C which is related to the removal of H_2O molecules, -OH groups and the dien ligands (found, 23.6 %; calcd, 24.2 %).