



Figure S11. X-ray diffraction patterns of fungal Mn oxides compared with Ni-sorbed $\delta\text{-MnO}_2$ (Grangeon et al. 2008). NidBi2-7 and NidBi177-7 contain respectively 0.1 and 0.2 “heavy” interlayer cations (Ni and Mn) at TC position. Solid arrows point out the intensity minimum appearing at $\sim 47^\circ 2\theta$ when the amount of interlayer Me cations at TC position increases from 0.1 to 0.2 per layer octahedron. When this number exceeds 0.2, a shoulder appears at $\sim 42^\circ 2\theta$ (dashed arrow).