



Fig. S1  $(\text{Mn,Ni,Cu})_3\text{BO}_5$  and  $(\text{Mn,Ni})_3\text{BO}_5$  samples with different composition, molded into plastic and mechanically polished for EDX analysis.

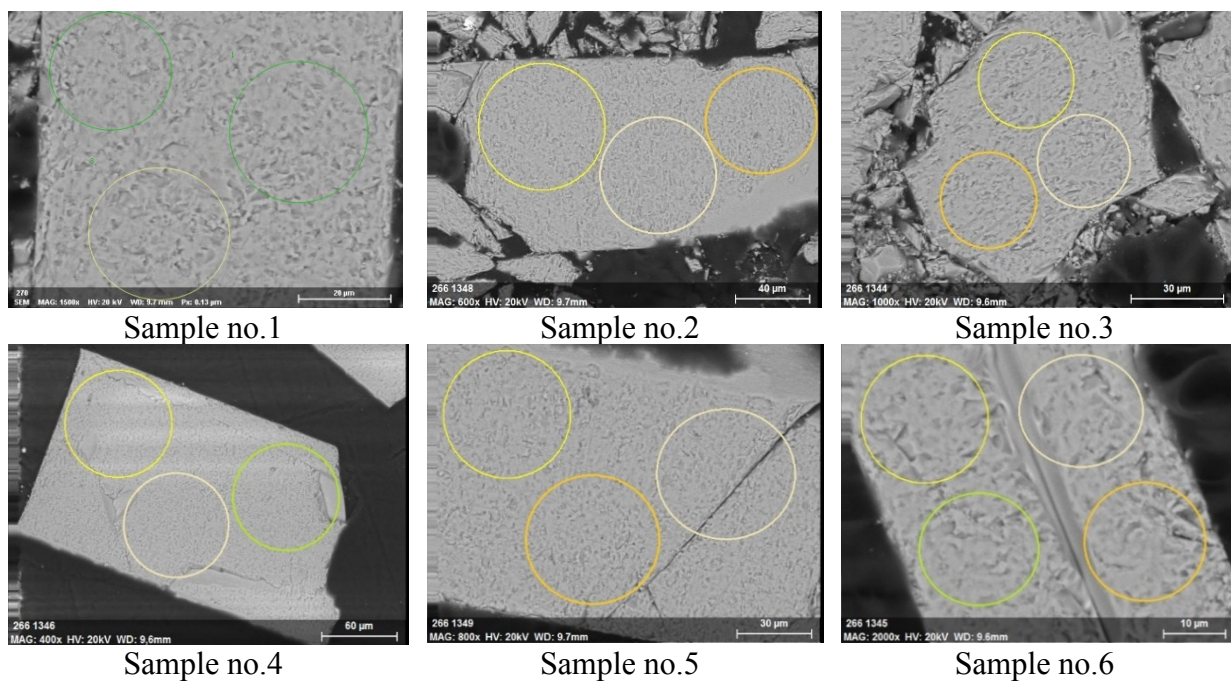
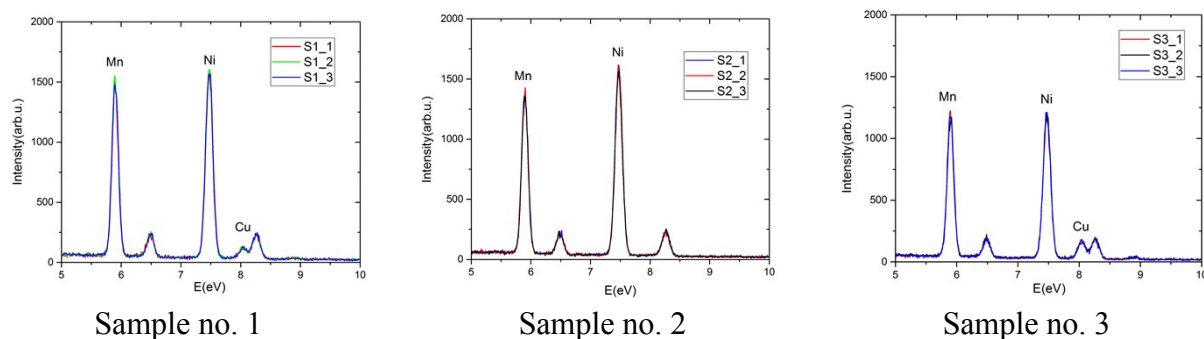
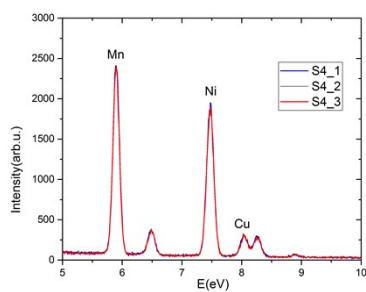
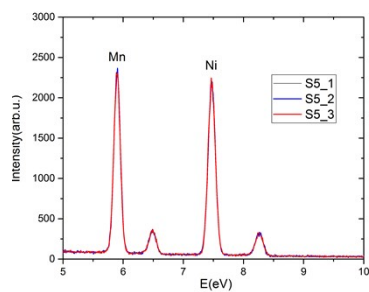


Fig. S2 The studied crystals. The circles show the sections chosen to analyze the spectra.

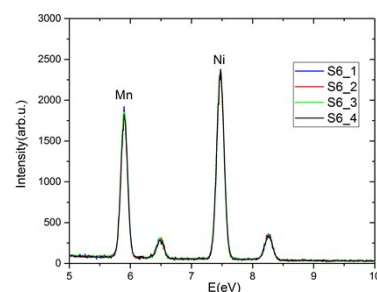




Sample no. 4

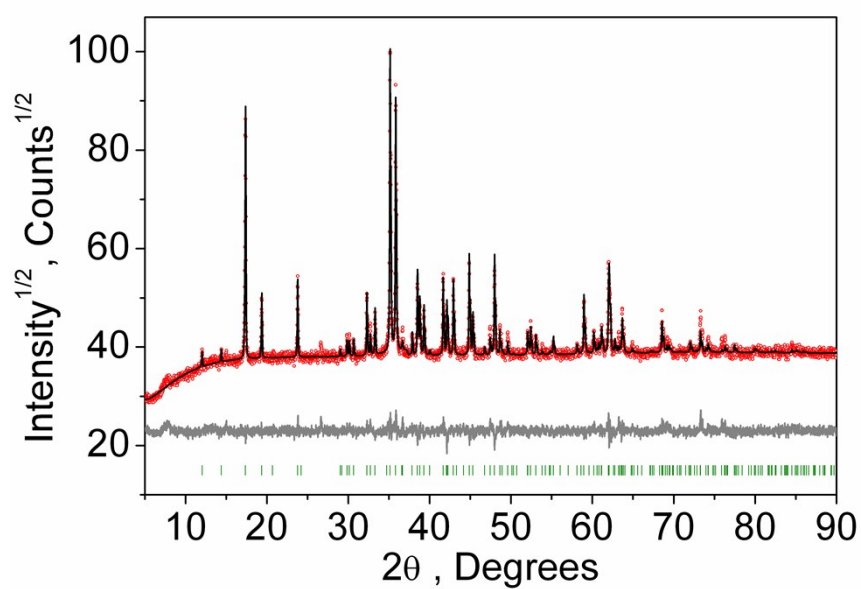


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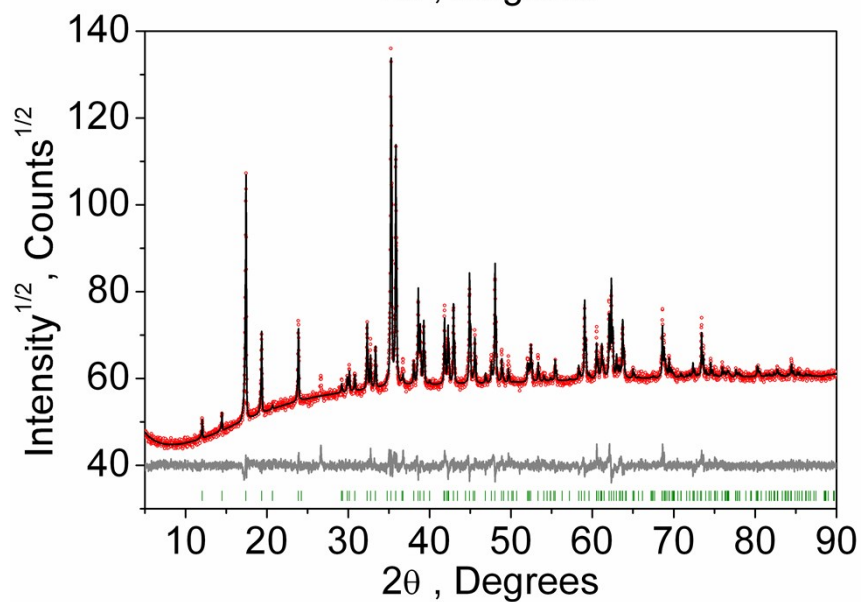


Sample no. 6

Fig. S3 The EDX spectra of the different sections (Fig. S2) of crystal samples.



(a)



(b)

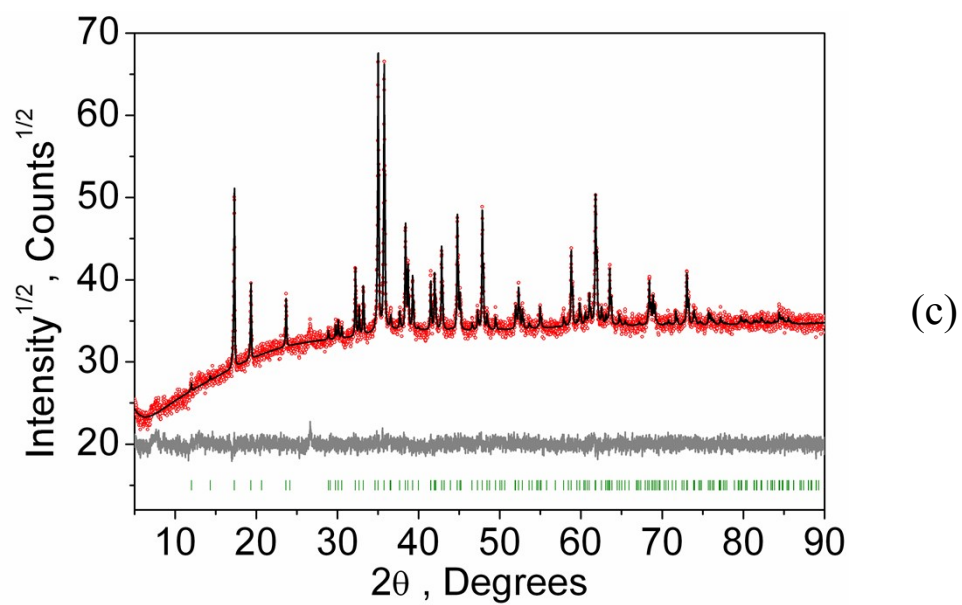


Fig. S4 Powder X-ray diffraction patterns of  $\text{Mn}_{3-x}\text{Ni}_x\text{BO}_5$ : a –  $x = 0.5$ ; b –  $x = 1.8$ ; c –  $x = 2.13$ ;