

Supporting information

**Role of $3d$ -electron configuration entropy on temperature
coefficients of redox potential in $\text{Co}_{1-z}\text{Mn}_z$ Prussian Blue analogue**

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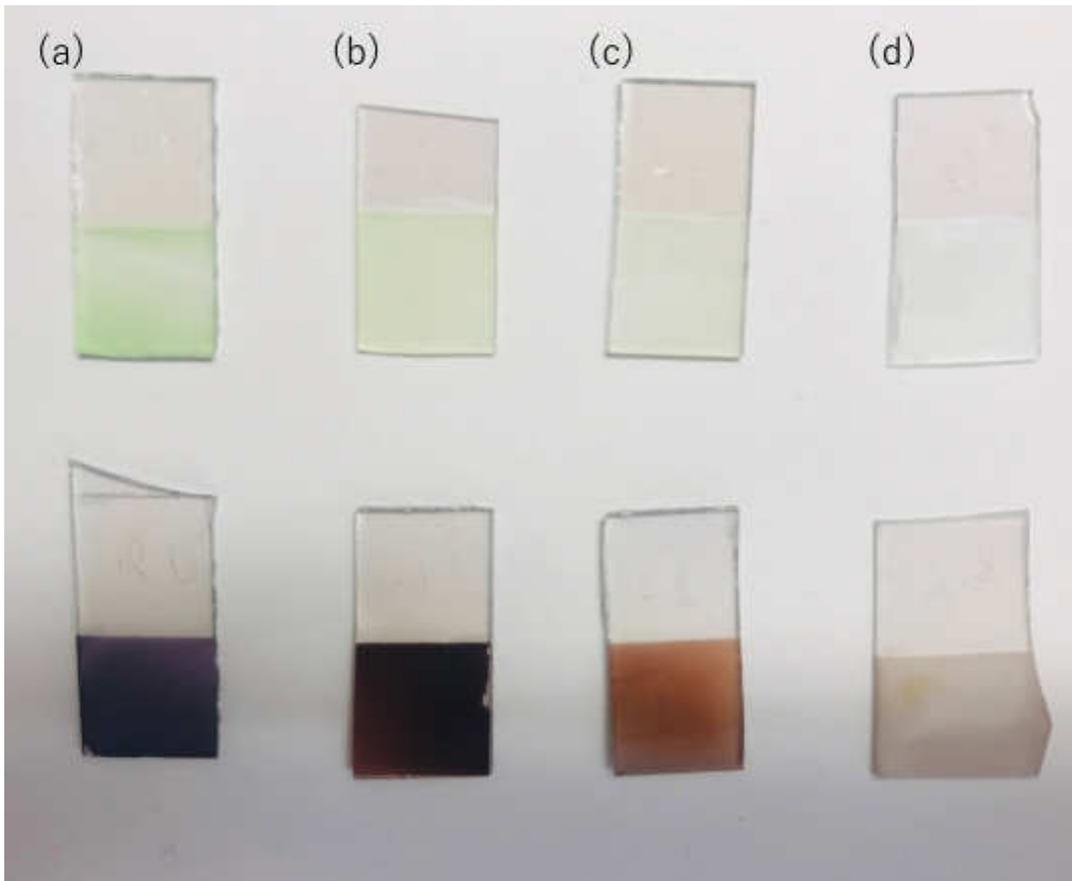


Fig. S1: $\text{Na}_x\text{Co}_{1-z}\text{Mn}_z[\text{Fe}(\text{CN})_6]_y$ films: (a) $z = 0.00$, (b) $z = 0.56$, (c) $z = 0.78$, and (d) $z = 1.00$. Upper and lower films represent the as-grown and x -controlled films to the middle point of the low- V plateau, respectively.

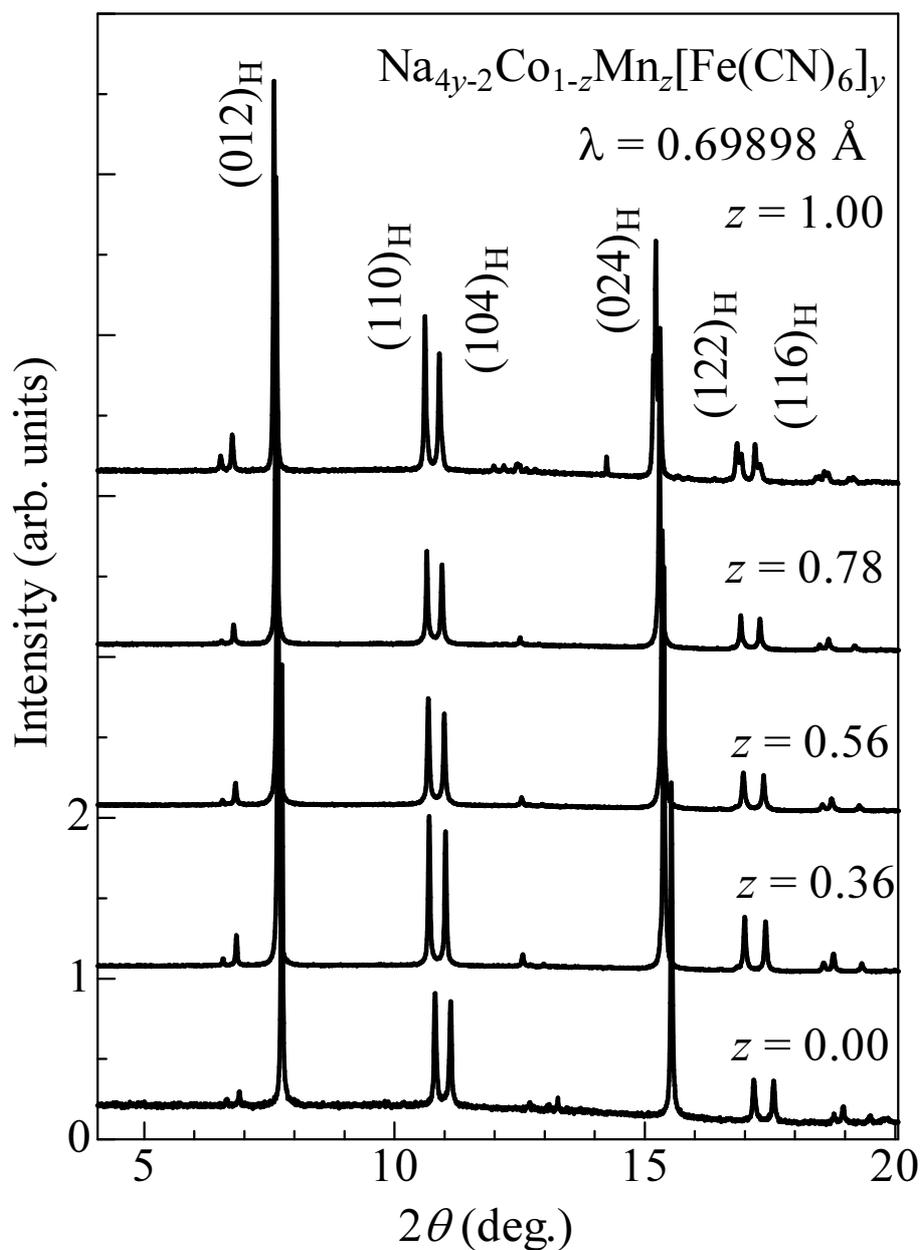


Fig. S2: X-ray powder diffraction (XRD) patterns of the as-grown $\text{Co}_{1-z}\text{Mn}_z$ Prussian blue analogue ($\text{Co}_{1-z}\text{Mn}_z\text{-PBA}$) film. Values in parentheses represent indexes in the trigonal (hexagonal setting) structures. The XRD patterns were obtained at BL02B2 beamline of SPring-8 with one-dimensional semiconductor detector (MYTHEN, Dectris Ltd.). Typical exposure time was 5 min. The wavelength of the X-rays ($=0.69898 \text{ \AA}$) was calibrated by the cell parameter of a standard CeO_2 powder.

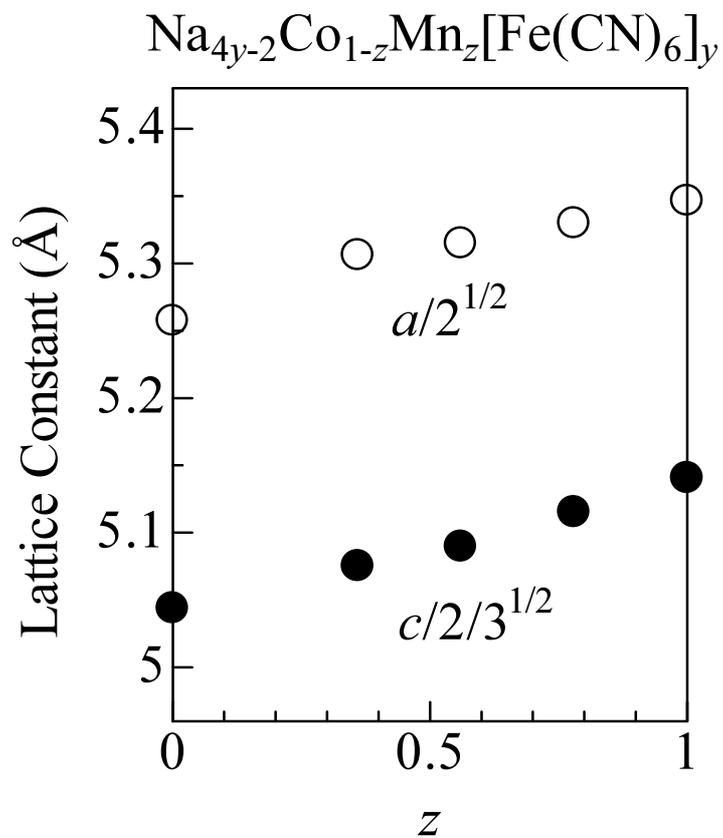


Fig. S3: Lattice constant of the as-grown $\text{Co}_{1-z}\text{Mn}_z$ -PBA. The cell parameters were refined using the Rietan-PF program.

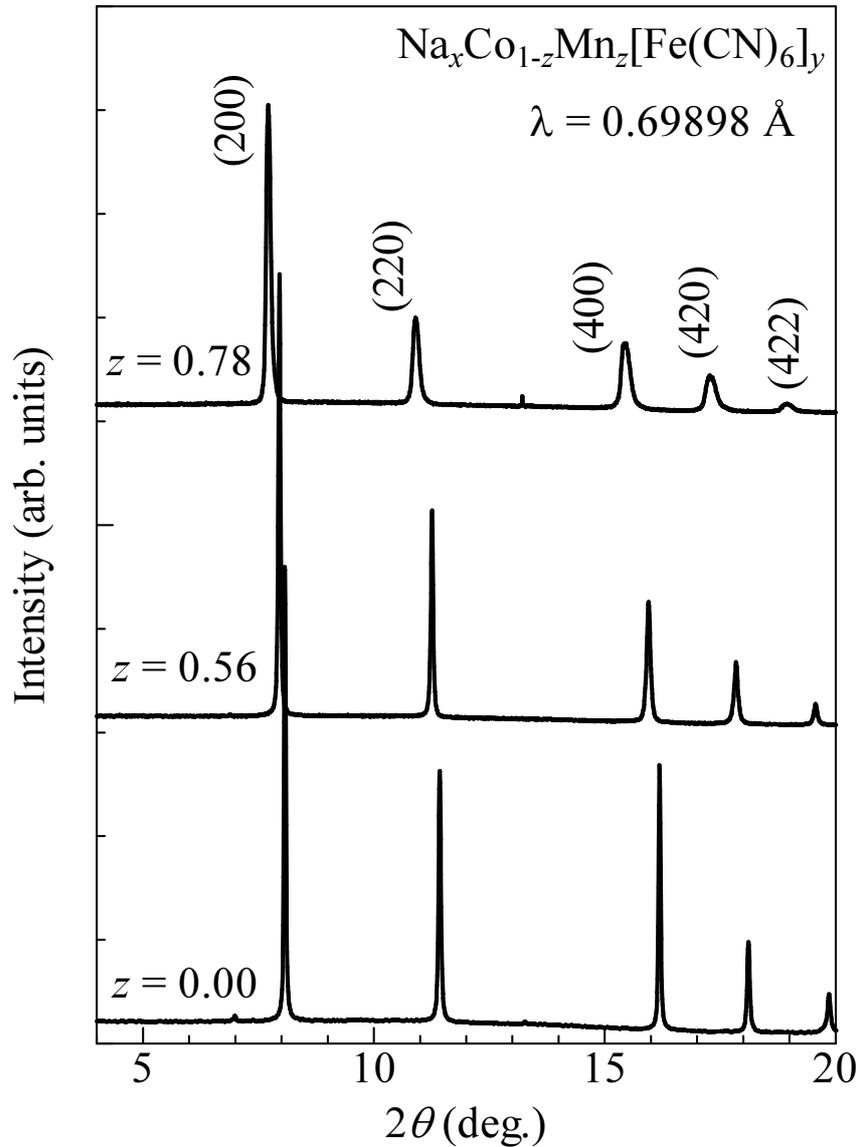


Fig. S4: XRD patterns of the x -controlled $\text{Co}_{1-z}\text{Mn}_z$ -PBA to the boundary between high- V and low- V plateaus. Values in parentheses represent indexes in the face-centered cubic structures. The XRD patterns were obtained at BL02B2 Beamline of SPring-8 with one-dimensional semiconductor detector (MYTHEN, Dectris Ltd.). Typical exposure time was 5 min. The wavelength of the X-rays ($=0.69898 \text{ \AA}$) was calibrated by the cell parameter of a standard CeO_2 powder.

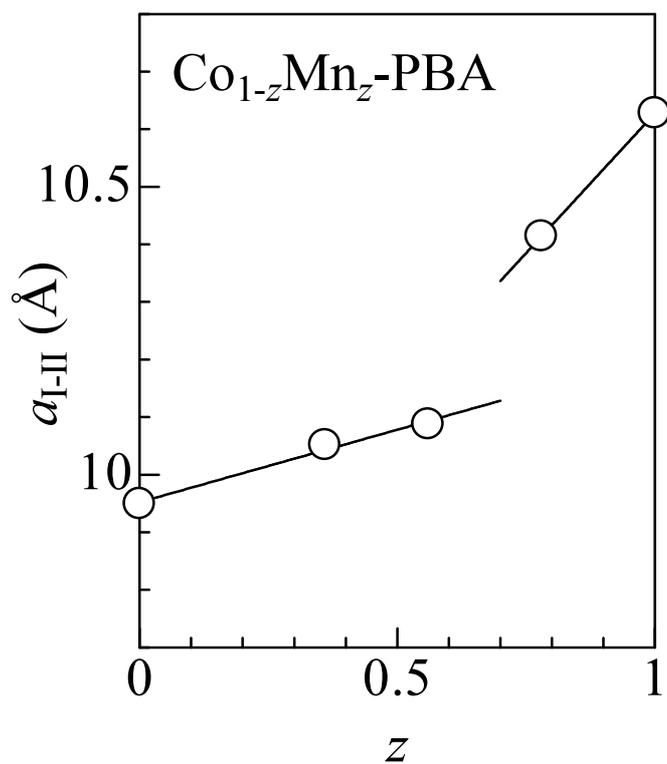


Fig. S5: Lattice constant of the x -controlled $\text{Co}_{1-z}\text{Mn}_z\text{-PBA}$ to the boundary between high- V and low- V plateaus against z . In the whole region of z , crystal structure was face-centered cubic. The cell parameters were refined using the Rietan-PF program. The straight lines are merely guides to the eyes.