

Supplementary figure captions list

Figure S1. Observed, calculated and difference X-ray diffraction profiles for a) $\text{SrFeO}_{3-\delta}$ and $\text{SrFe}_{0.90}\text{Si}_{0.10}\text{O}_{3-\delta}$.

Figure S2. ^{57}Fe Mössbauer spectra recorded from $\text{SrFe}_{0.90}\text{Si}_{0.10}\text{O}_{3-\delta}$ at 300, 68, 42 and 15K.

Supplementary Table Captions List

Table S1. (h k l) values of the main diffraction peaks for $\text{SrFeO}_{3-\delta}$ (tetragonal space group, I 4/m m m).

Table S2. (h k l) values of the main diffraction peaks for $\text{SrFe}_{0.9}\text{Si}_{0.1}\text{O}_{3-\delta}$ (cubic space group, P m $\bar{3}$ m).

Table S1. (h k l) values of the main diffraction peaks for SrFeO_{3-δ} (tetragonal space group, I 4/m m m).

Position (°2θ)	(h k l)
22.98	(2 2 0)
23.06	(0 0 2)
32.74	(4 0 0)
32.80	(2 2 2)
40.44	(4 0 2)
46.99	(4 4 0)
47.17	(0 0 4)
52.94	(6 2 0)
52.99	(4 4 2)
53.11	(2 2 4)
58.50	(6 2 2)
58.62	(4 0 4)

Table S2. (h k l) values of the main diffraction peaks for SrFe_{0.9}Si_{0.1}O_{3-δ} (cubic space group, P m -3 m).

Position (°2θ)	(h k l)
22.92	(1 0 0)
32.65	(1 1 0)
40.28	(1 1 1)
46.86	(2 2 0)
52.80	(2 1 0)
58.30	(2 1 1)