Erratum: Structure and magnetism of Fe-doped SnO₂ nanoparticles [Phys. Rev. B **78, 024404 (2008)]**

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(Received 4 March 2021; published 29 April 2021)

DOI: [10.1103/PhysRevB.103.139901](https://doi.org/10.1103/PhysRevB.103.139901)

The powder x-ray-diffraction (XRD) patterns of the $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ ($x = 0.0, 0.03, 0.05, 0.075, 0.10, 0.125, 0.75$, and 1.0) measured in a Philips PW1840 diffractometer equipped with a Cu target were reported in Fig. 1 of the original paper [Adhikari *et al.*, Phys. Rev. B **78**, 024404 (2008)]. However, an unintentional error in the XRD radial scans came to the notice of the authors, where the presented data for the samples with $x = 0.75$ and $x = 1.0$ were essentially the same. This error is rectified in this Erratum. In Fig. 1(a) of this Erratum, the correct data for the measured radial scans of the samples $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ with $x = 0.75$ and $x = 1.0$ are shown. In order to clarify that the data represented here are for the two distinct samples, in Fig. 1(b), a magnified view of the data between $2\theta = 55^\circ$ and 62° is reported.

Additionally, the recorded radial scans of the two samples have also been measured in the Philips PW1840 diffractometer with a Co target and the data are presented in Fig. 2. It is emphasized that the unintentional error in the original article did not affect the outcome and conclusions of the paper.

In Fig. 3 of this paper, the high-resolution x-ray-diffraction data (XRD) of $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ with $x = 0.03$, $x = 0.05$, and $x = 0.075$ were presented. For the radial scan of the sample with $x = 0.03$, a feature around 24° gives the impression that some data points are missing. This feature is now identified as a machine-related software issue in the acquisition process and, to clarify that no intentional modification of the recorded data was done, a new figure is provided in the Erratum where the radial scan of the sample $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ with $x = 0.03$ has been measured in three different XRD machines namely, Rigaku Miniflex, the Philips PW1840, and the Philips Panalytical Materials Research Diffractometer (MRD) equipped with a Cu target. The data are reported in Fig. 3 of this Erratum. As can be seen in Fig. 3, no Bragg reflections around 24° are detected by either the Rigaku Miniflex or by the Philips PW1840 machines. Further, the magnetic measurements, as reported in the original publication, did not show any intrinsic ferromagnetism in the $\text{Sn}_{0.97}\text{Fe}_{0.03}\text{O}_2$ sample and thus the possibility of any hidden ferromagnetic secondary phase can be ruled out.

FIG. 1. (a) Logarithmic plots of XRD data for $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ ($x = 0.75, 1.0$) nanoparticles calcined at a temperature of 600°C . (b) Radial scan of $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ nanoparticles with $x = 1.0$ and $x = 0.75$ magnified between 55° and 62° showing that the data are presented for two distinct samples.

FIG. 2. Radial scan of $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ nanoparticles with $x = 1.0$ and $x = 0.75$ measured in a Philips PW1840 diffractometer with Co target.

FIG. 3. Radial scan of $\text{Sn}_{0.97}\text{Fe}_{0.03}\text{O}_2$ nanoparticles measured in Rigaku Miniflex, Philips PW1840, and Panalytical MRD diffractometers with Cu target. The data recorded with the Panalytical diffractometer are the data shown in Fig. 3 of this paper for $x = 0.03$.