



Correction to: Structural, morphological and magnetic characters of PVP coated ZnFe₂O₄ nanoparticles

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Correction to:

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The original version of this article (<https://doi.org/10.1007/s10854-017-8127-4>) was published with following errors. This has been corrected with this erratum.

1. In abstract: “XY₂Z₄ (X = Zn, Y = Fe and Z = O)” should be read as “X_xY_{3-x}Z₄ (X = Zn, Y = Fe, Z = O)”
2. In Sect. 3, 3.1 Structural analysis “it is evident that there is no detectable trace of extra peaks corresponds to impurity and amorphous phase in the patterns” should read as “it is evident that there are distinctly separated peaks corresponding polycrystalline phase. The XRD patterns are observed using SHIMADZU-XRD 6000”.
3. In Sect. 2, “2.2 Synthesis of PVP coated ZnFe₂O₄ nanoparticles” should read as “2.2 Synthesis of PVP coated Zn_xFe_{3-x}O₄ (x = 0.00, 0.01, 0.02, 0.03, 0.04) nanoparticles”
4. In Sect. 2, 2.2 “(X = 0.01, 0.02, 0.03 and 0.04 M)” should be removed
5. In Sect. 3, 3.1 Structural analysis “Fig. 1 XRD patterns of a Fe₃O₄, b Zn_{0.01M}Fe₂O₄, c Zn_{0.02M}Fe₂O₄, d Zn_{0.03M}Fe₂O₄ and e Zn_{0.04M}Fe₂O₄ nanoparticles” should read as “Fig. 1 XRD patterns of a Fe₃O₄, b Zn_{0.01M}Fe_{2.99M}O₄, c Zn_{0.02M}Fe_{2.98M}O₄, d Zn_{0.03M}Fe_{2.97M}O₄ and e Zn_{0.04M}Fe_{2.96M}O₄ nanoparticles”
6. In Sect. 3, 3.1 Structural analysis “The crystallite size of the sample (11.14 nm) is estimated using Scherrer’s equation” should read as “The crystallite size of the sample is ranging between 9 and 20 nm estimated using Scherrer’s equation”
7. In Sect. 3, 3.1 Structural analysis “From this table, the average lattice constant is ~8.4 Å” should read as “From this table, the average lattice constant is ~8.3 Å”
8. In Sect. 3, 3.1 Structural analysis “It is revealed that the nanoparticles may have cubic structure because of all the values of lattice constants (a) are almost equal. We conclude from the above said analysis that the structural length lies between tetrahedral and octahedral sites within the unit cell. Therefore, the Zn materials are grown on the Fe materials may lead to the super paramagnetic behavior of an entire system” this paragraph was wrongly assigned by authors. So, it has been removed and incorporates “Thus the Zn_xFe_{3-x}O₄ nanoparticles are polycrystalline and have fcc structure”.
9. In Fig. 2 “Fig. 2 FTIR spectra of a Fe₃O₄, b Zn_{0.01M}Fe₂O₄, c Zn_{0.02M}Fe₂O₄, d Zn_{0.03M}Fe₂O₄, and e Zn_{0.04M}Fe₂O₄ nanoparticles” should read as “Fig. 2 FTIR spectra of a Fe₃O₄, b Zn_{0.01M}Fe_{2.99M}O₄, c Zn_{0.02M}Fe_{2.98M}O₄, d Zn_{0.03M}Fe_{2.97M}O₄ and e Zn_{0.04M}Fe_{2.96M}O₄ nanoparticles”
10. Table 1: Table was inadvertently submitted wrongly and published in the original article. The corrected version of Table 1 is given below.
11. In Section 3.3 Morphological analysis “Zn_xFe₂O₄” should read as “Zn_xFe_{3-x}O₄”.
12. In Section 3.3 Morphological analysis “Chemical purity and stoichiometry of the Fe₃O₄ and ZnFe₂O₄ nanoparticles were investigated by EDAX spectroscopy”

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Table 1 Structural properties of ferrite nanoparticles

Materials	2θ (deg)	β FWHM (deg)	d spacing (Å)	Crystallite size (nm)	Lattice constant (Å)
Fe ₃ O ₄	35.45	0.66	2.52	12	8.35
Zn _{0.01} Fe _{2.99} O ₄	35.39	0.43	2.53	19	8.39
Zn _{0.02} Fe _{2.98} O ₄	35.38	1.00	2.53	8	8.39
Zn _{0.03} Fe _{2.97} O ₄	35.48	0.75	2.52	11	8.35
Zn _{0.04} Fe _{2.96} O ₄	35.35	0.87	2.53	9	8.39

copy” should read as “Chemical purity and stoichiometry of the Fe₃O₄ and Zn_{0.03}Fe_{2.97}O₄ nanoparticles were investigated by EDAX spectroscopy”

13. In Table 2: “Fe₃O₄, Zn_{0.01M}Fe₂O₄, Zn_{0.02M}Fe₂O₄, Zn_{0.03M}Fe₂O₄, Zn_{0.04M}Fe₂O₄” should read as “Fe₃O₄, Zn_{0.01M}Fe_{2.99M}O₄, Zn_{0.02M}Fe_{2.98M}O₄, Zn_{0.04M}Fe_{2.97M}O₄, Zn_{0.04M}Fe_{2.96M}O₄”
14. In Conclusions: “The XRD patterns confirmed that the particle size of the powders annealed at 600 °C was found to be ~ 11.14 nm” should read as “The XRD patterns confirmed that the particle size of the powders annealed at 600 °C was found to be 11 nm”
15. In Fig. 4: “Fig. 4 a, b TEM images, c SAED pattern and d EDAX spectrum of Zn_xFe₂O₄ (x = 0.03 M) nanoparticles” should read as “Fig. 4 a, b TEM images, c SAED pattern and d EDAX spectrum of Zn_xFe_{3-x}O₄ (x = 0.03 M) nanoparticles”
16. In Table 4 “Table 4 EDAX spectrum analysis of ZnFe₂O₄” should read as “Table 4 EDAX spectrum analysis of Zn_{0.03M}Fe_{2.97M}O₄”
17. In Fig. 5: “Figure 5 shows a typical M–H diagram for (a) Fe₃O₄ and (b) ZnFe₂O₄ nanoparticles” should read as “Figure 5 shows a typical M-H diagram for (a) Fe₃O₄ and (b) Zn_{0.03M}Fe_{2.97M}O₄ nanoparticles”
18. In Table 5 “Table 5 VSM analysis of Fe₃O₄ and Zn_{0.03M}Fe₂O₄” should read as “Table 5 VSM analysis of Fe₃O₄ and Zn_{0.03M}Fe_{2.97M}O₄”
19. In Acknowledgements: “nonmaterial” should read as “nanomaterials”

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