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Author Correction: Understanding the mechanisms behind the antibacterial activity of magnesium hydroxide nanoparticles against sulfate-reducing bacteria in sediments

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Correction to: *Scientific Reports* <https://doi.org/10.1038/s41598-024-72516-7>, published online 18 September 2024

The original version of this Article contained errors.

Figures 1 and 2 were inadvertently published as Figure 2 and 1.

The original Figures 1 and 2 and accompanying legends appear below.

In addition, the Figure legends of Figure 10 and Figure 11 were interchanged.

The legend of Figure 10:

“Catalase (CAT) intracellular activity at different Mg(OH)₂ NP (a) and Mg²⁺ concentrations (b) (** $p < 0.01$ vs. control [0 mg/mL at 6 h]). NP, nanoparticle.”

now reads:

“Intracellular H₂O₂ content at different Mg(OH)₂ NP (a) and Mg²⁺ concentrations (b) (** $p < 0.01$ vs. control [0 mg/mL at 6 h]). NP, nanoparticle.”

The legend of Figure 11:

“Intracellular H₂O₂ content at different Mg(OH)₂ NP (a) and Mg²⁺ concentrations (b) (** $p < 0.01$ vs. control [0 mg/mL at 6 h]). NP, nanoparticle.”

now reads:

“Catalase (CAT) intracellular activity at different Mg(OH)₂ NP (a) and Mg²⁺ concentrations (b) (** $p < 0.01$ vs. control [0 mg/mL at 6 h]). NP, nanoparticle.”

Finally, in the Results section, under the subheading ‘Dissolution effect of NPs’, there was an error in the citation of Figure 14.

“Figure 10 illustrates the concentrations of intracellular and extracellular dissolved Mg²⁺ ions in SRB treated with different concentrations of Mg(OH)₂ NPs.”

now reads:

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“Figure 14 illustrates the concentrations of intracellular and extracellular dissolved Mg^{2+} ions in SRB treated with different concentrations of $Mg(OH)_2$ NPs.”

The original Article has been corrected.

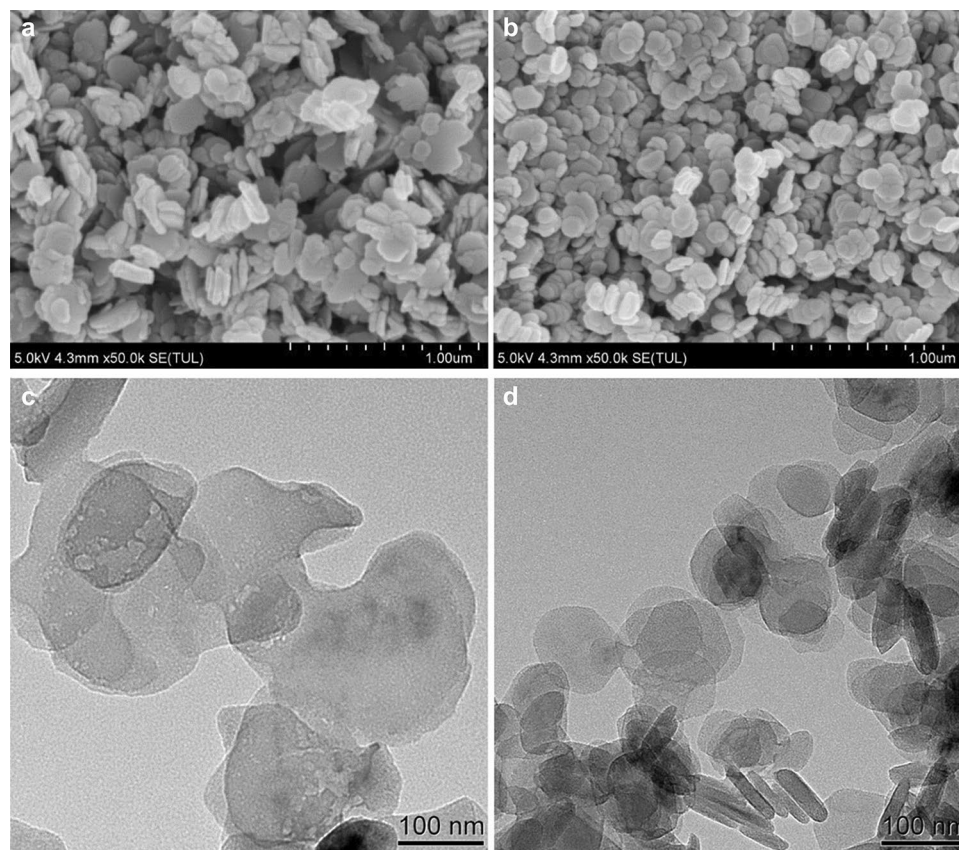


Fig. 1. X-ray diffraction (XRD) images of $Mg(OH)_2$ NPs prepared using different methods. (a) Forward precipitation using ammonium hydroxide. (b) Reverse precipitation using sodium hydroxide. The red arrows indicate sodium chloride peaks. NPs, nanoparticles.

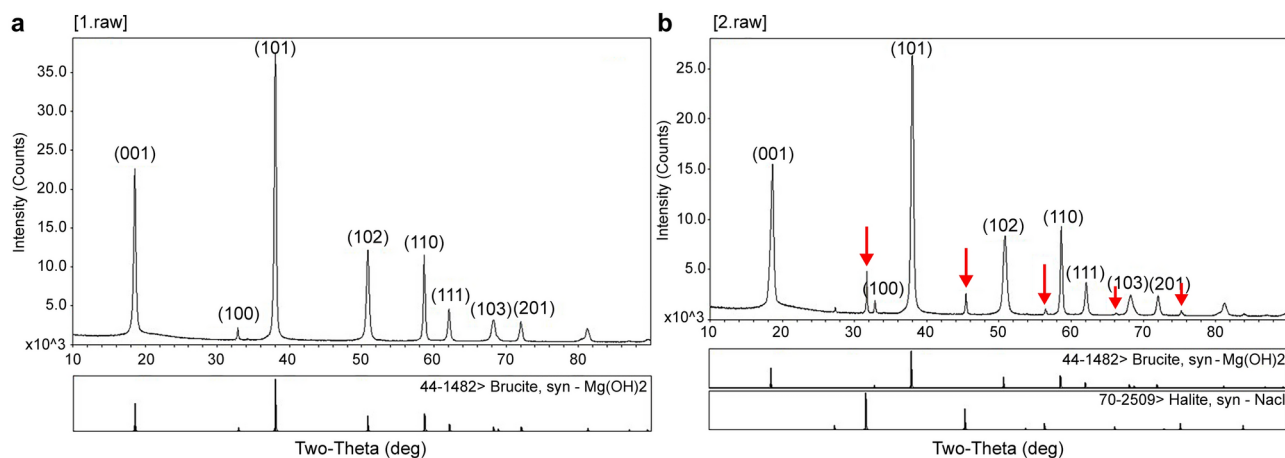


Fig. 2. Scanning electron microscopy (SEM) images (a, b) and transmission electron microscopy (TEM) images (c, d) of $Mg(OH)_2$ NPs prepared by different methods. (a, c) Forward precipitation using ammonium hydroxide. (b, d) Reverse precipitation using sodium hydroxide. NPs, nanoparticles.

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