

***Supplementary information to***

**Formation of manganese phosphate and manganese carbonate during  
long-term sorption of Mn<sup>2+</sup> by viable *Shewanella putrefaciens*:  
effects of contact time and temperature**

by

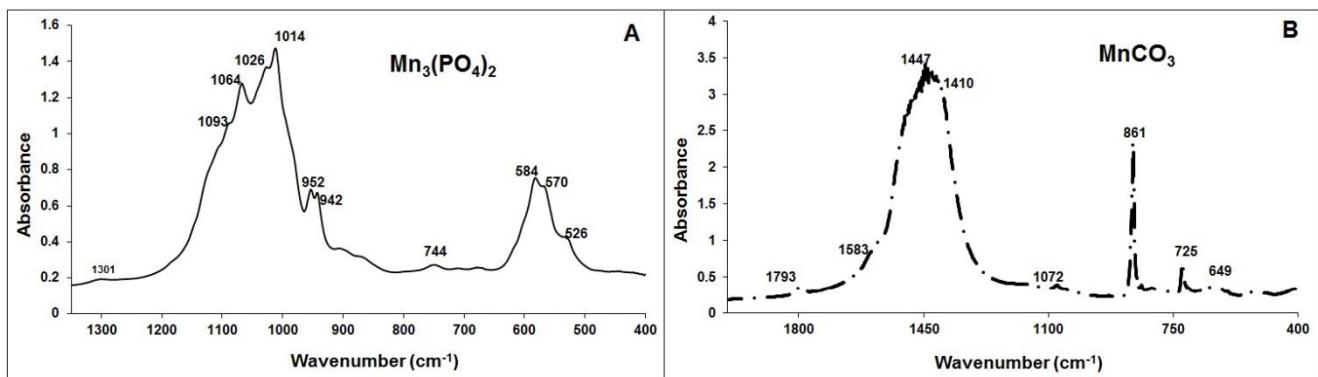
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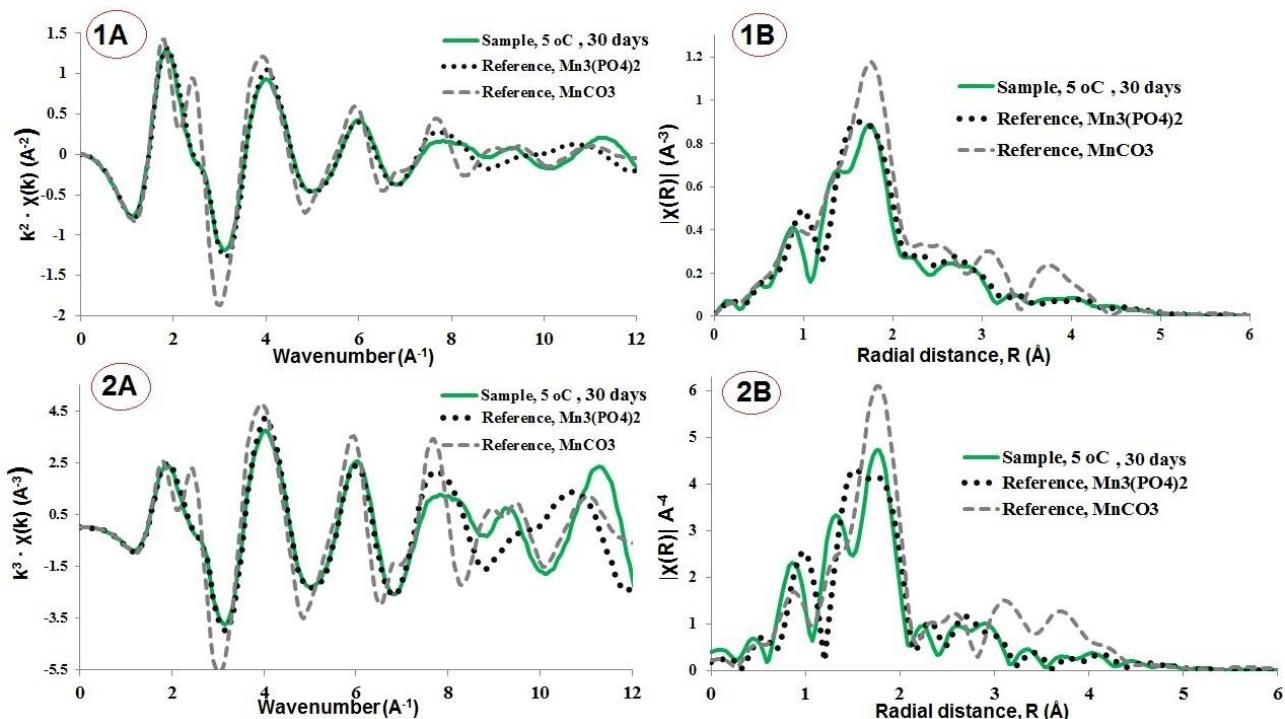
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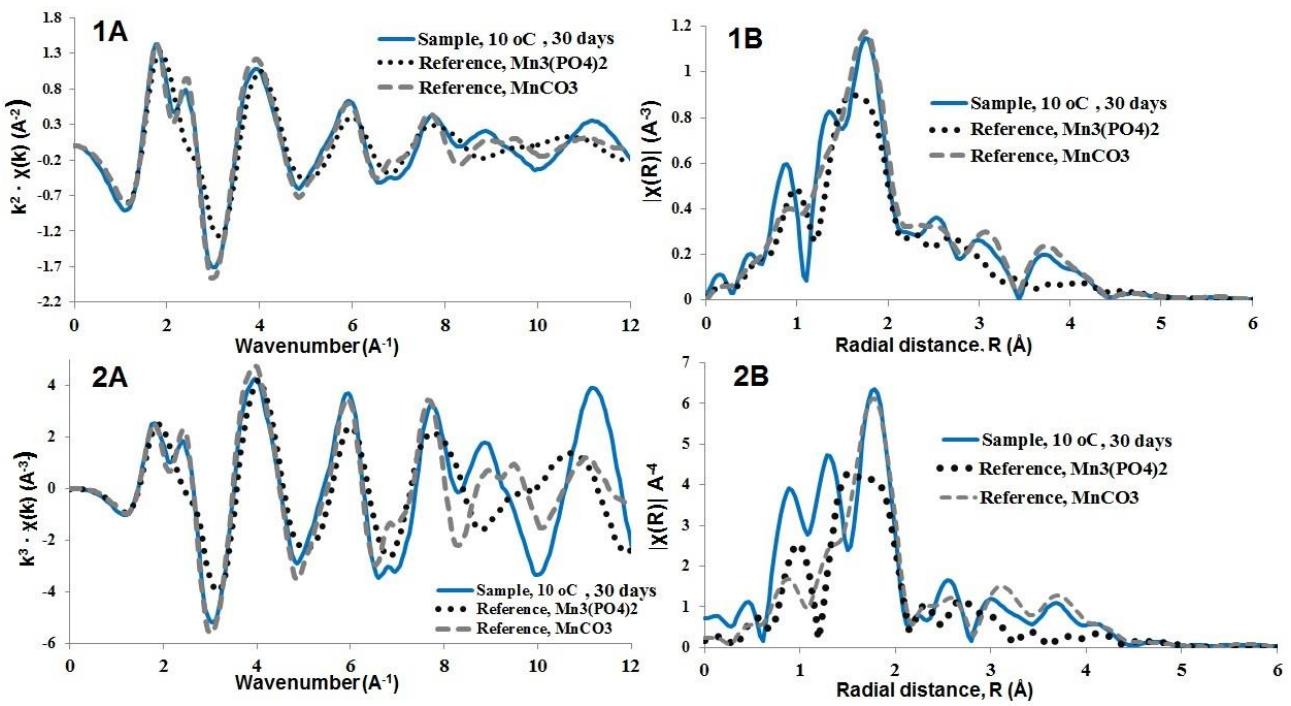
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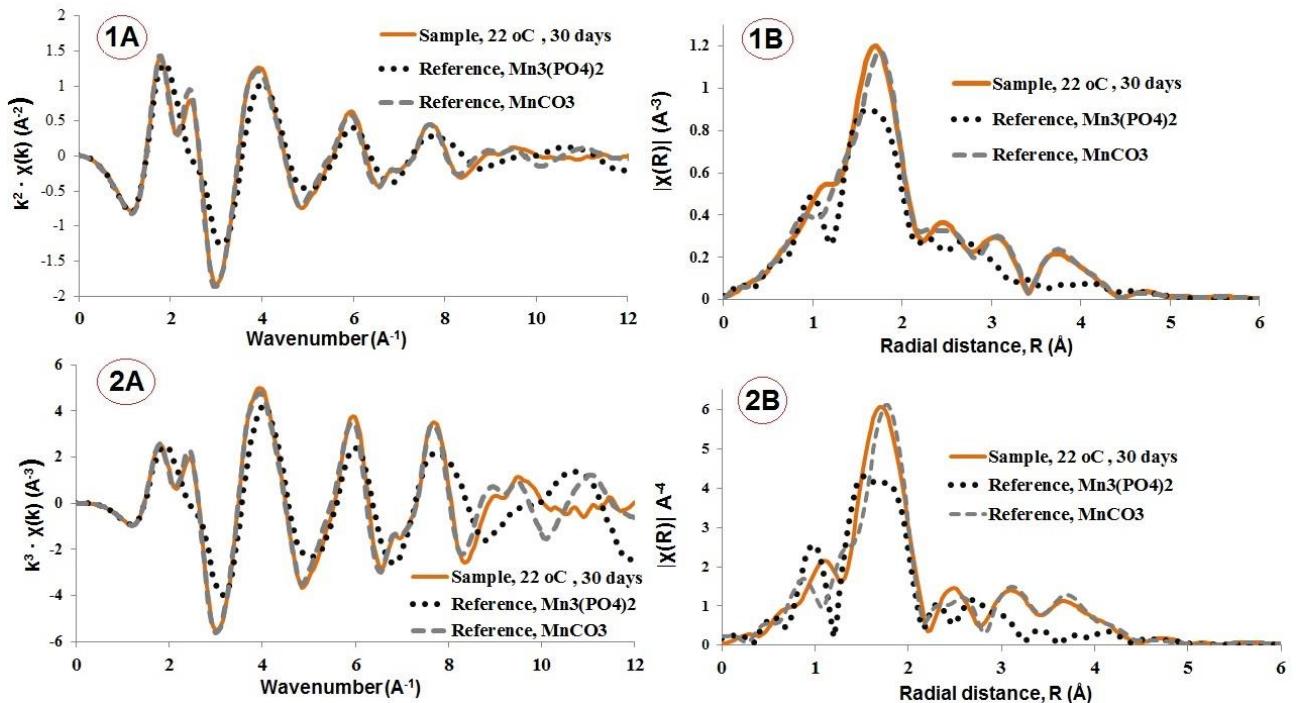
**Fig. 1S** FTIR spectra of the references:  $\text{Mn}_3(\text{PO}_4)_2$  (A) and  $\text{MnCO}_3$  (B).



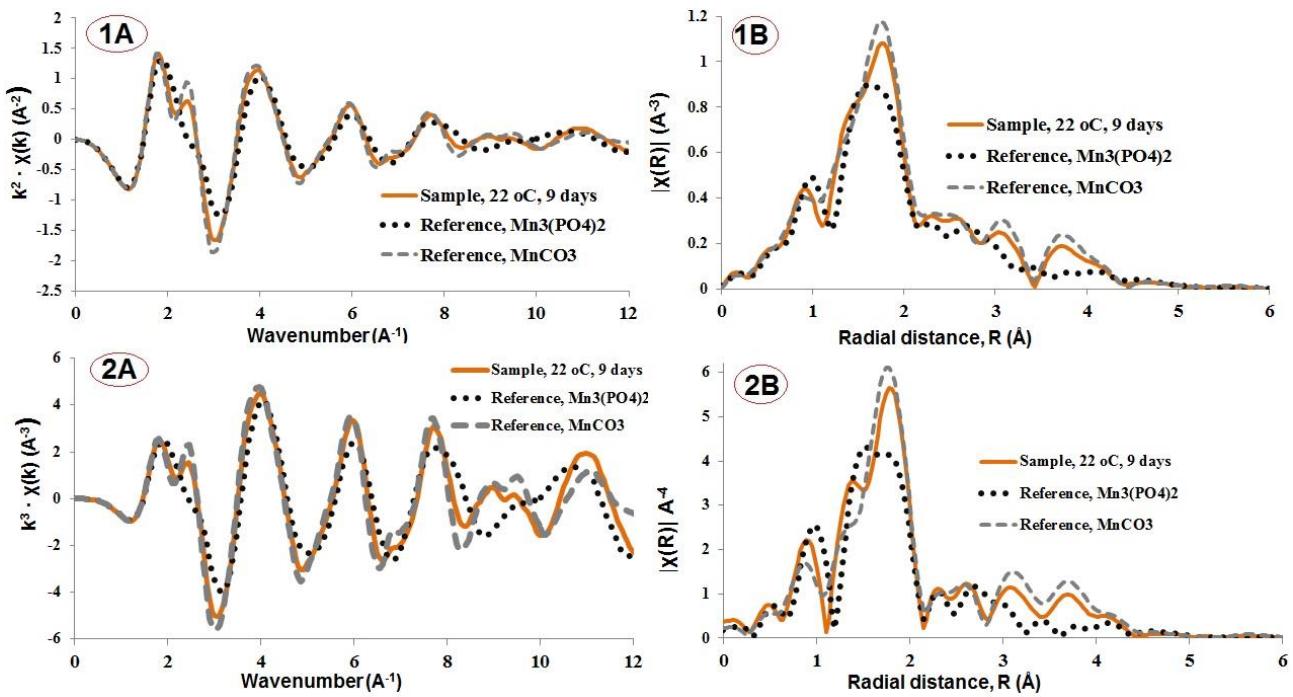
**Fig. 2S**  $k^2$ -weighted (1) and  $k^3$ -weighted (2) Mn K-edge EXAFS spectra (A) and their Fourier Transforms (B) of Mn-containing sample of *Shewanella putrefaciens* contacted to aqueous  $\text{Mn}^{2+}$  at 5 °C for 30 days. *This figure is linked to the Fig. 4A of the main body of the article.*



**Fig. 3S**  $k^2$ -weighted (1) and  $k^3$ -weighted (2) Mn K-edge EXAFS spectra (A) and their FTs (B) of Mn-containing sample of *Shewanella putrefaciens* contacted to aqueous  $Mn^{2+}$  at 10 °C for 30 days. *This figure is linked to the Fig. 4B of the main body of the article.* .

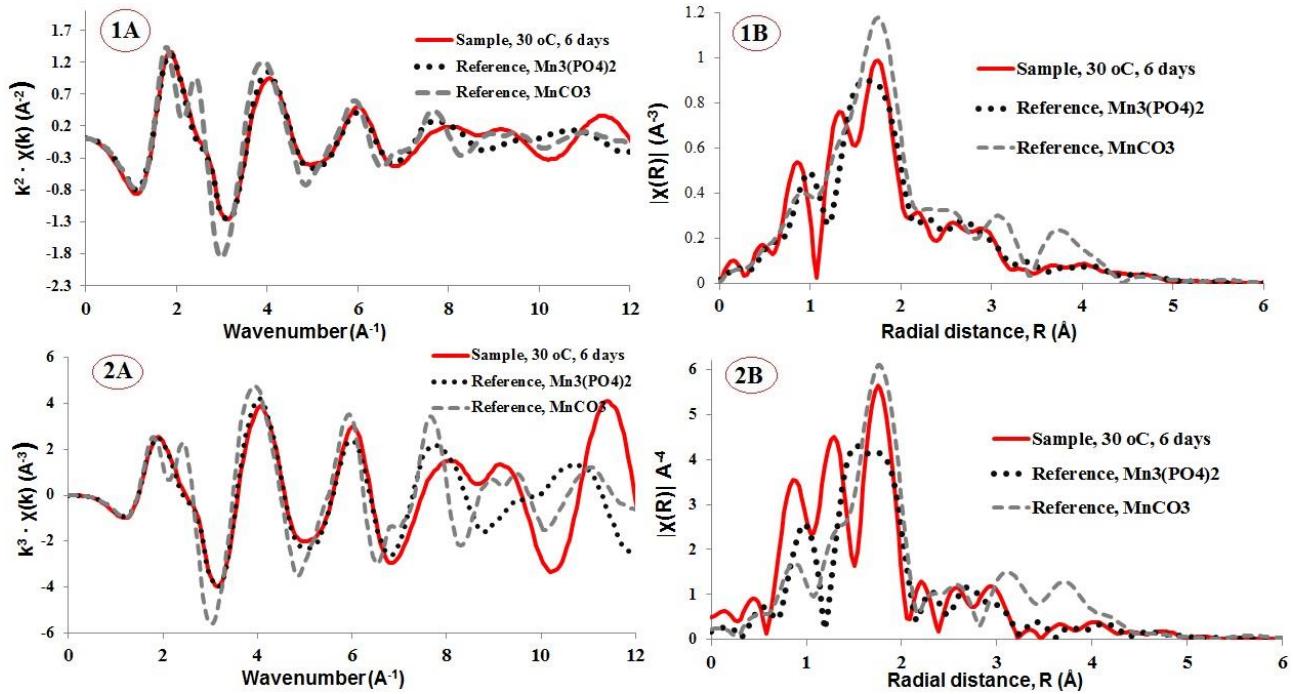


**Fig. 4S**  $k^2$ -weighted (1) and  $k^3$ -weighted (2) Mn K-edge EXAFS spectra (A) and their FTs (B) of Mn-containing sample of *Shewanella putrefaciens* contacted to aqueous  $Mn^{2+}$  at 22 °C for 30 days. *This figure is linked to the Fig. 4C of the main body of the article.* .



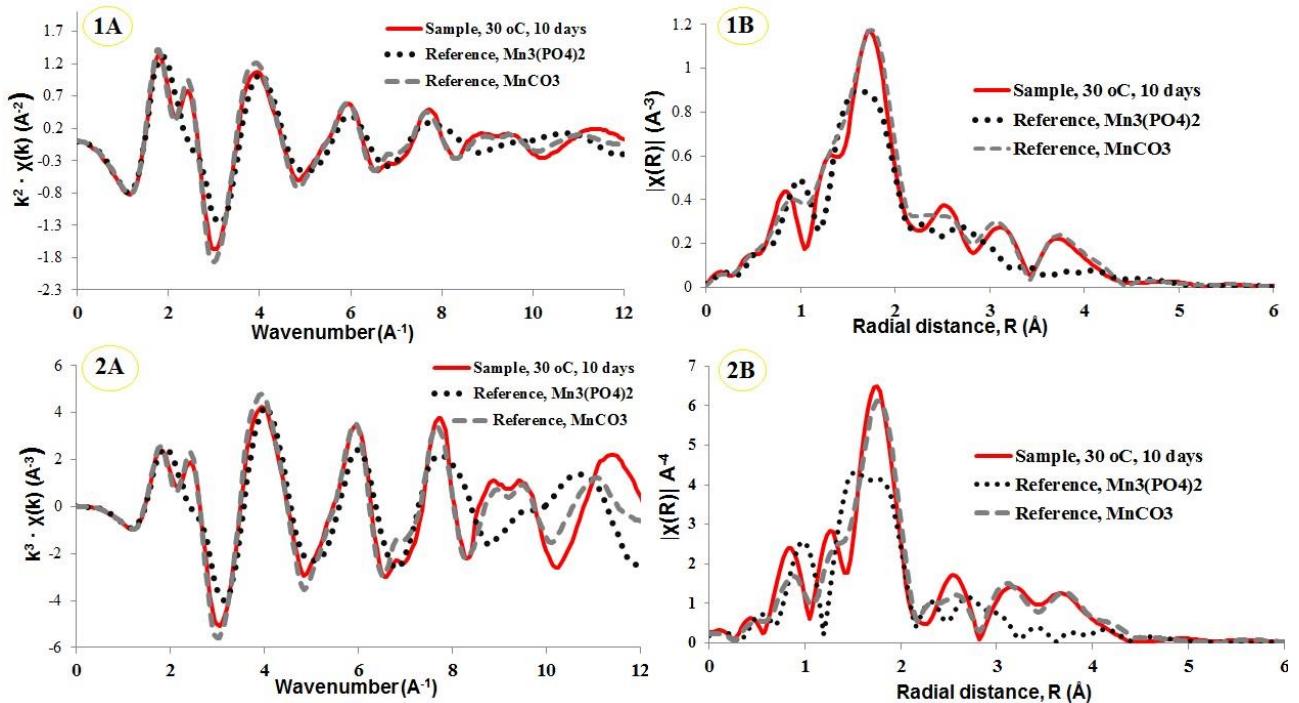
**Fig. 5S**  $k^2$ -weighted (1) and  $k^3$ -weighted (2) Mn K-edge EXAFS spectra (A) and their FTs (B) of Mn-containing sample of *Shewanella putrefaciens* contacted to aqueous  $Mn^{2+}$  at 22 °C for 9 days.

*This figure is linked to the Fig. 5 of the main body of the article.*



**Fig. 6S**  $k^2$ -weighted (1) and  $k^3$ -weighted (2) Mn K-edge EXAFS spectra (A) and their FTs (B) of Mn-containing sample of *Shewanella putrefaciens* contacted to aqueous  $Mn^{2+}$  at 30 °C for 6 days.

*This figure is linked to the Fig. 6A of the main body of the article.*



**Fig. 7S**  $k^2$ -weighted (1) and  $k^3$ -weighted (2) Mn K-edge EXAFS spectra (A) and their FTs (B) of Mn-containing sample of *Shewanella putrefaciens* contacted to aqueous  $Mn^{2+}$  at 30 °C for 10 days. *This figure is linked to the Fig. 6B of the main body of the article.*