

## Supplementary material

**Fig. S1.** The pH titration curve of the mixed solution for the precipitation of the Mg-Fe LDH with Mg/Fe molar ratio of 3.0 at 40°C for 2 h by adding 0.5 mol·L<sup>-1</sup> NaOH solution by co-precipitation method only using NaOH as precipitator.

