Supplementary information

Peculiarities of the formation, structural and morphological properties of zinc whitlockite ($Ca_{18}Zn_2(HPO_4)_2(PO_4)_{12}$) synthesized via phase transformation process under hydrothermal conditions

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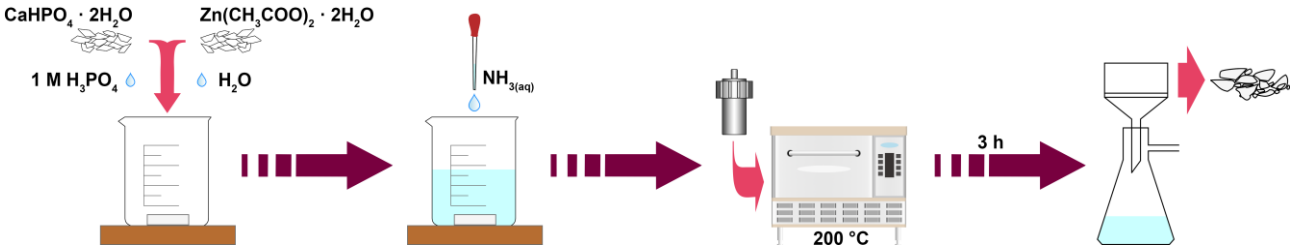

Figure S1. Schematic representation of the synthesis of Zn-WH powders.

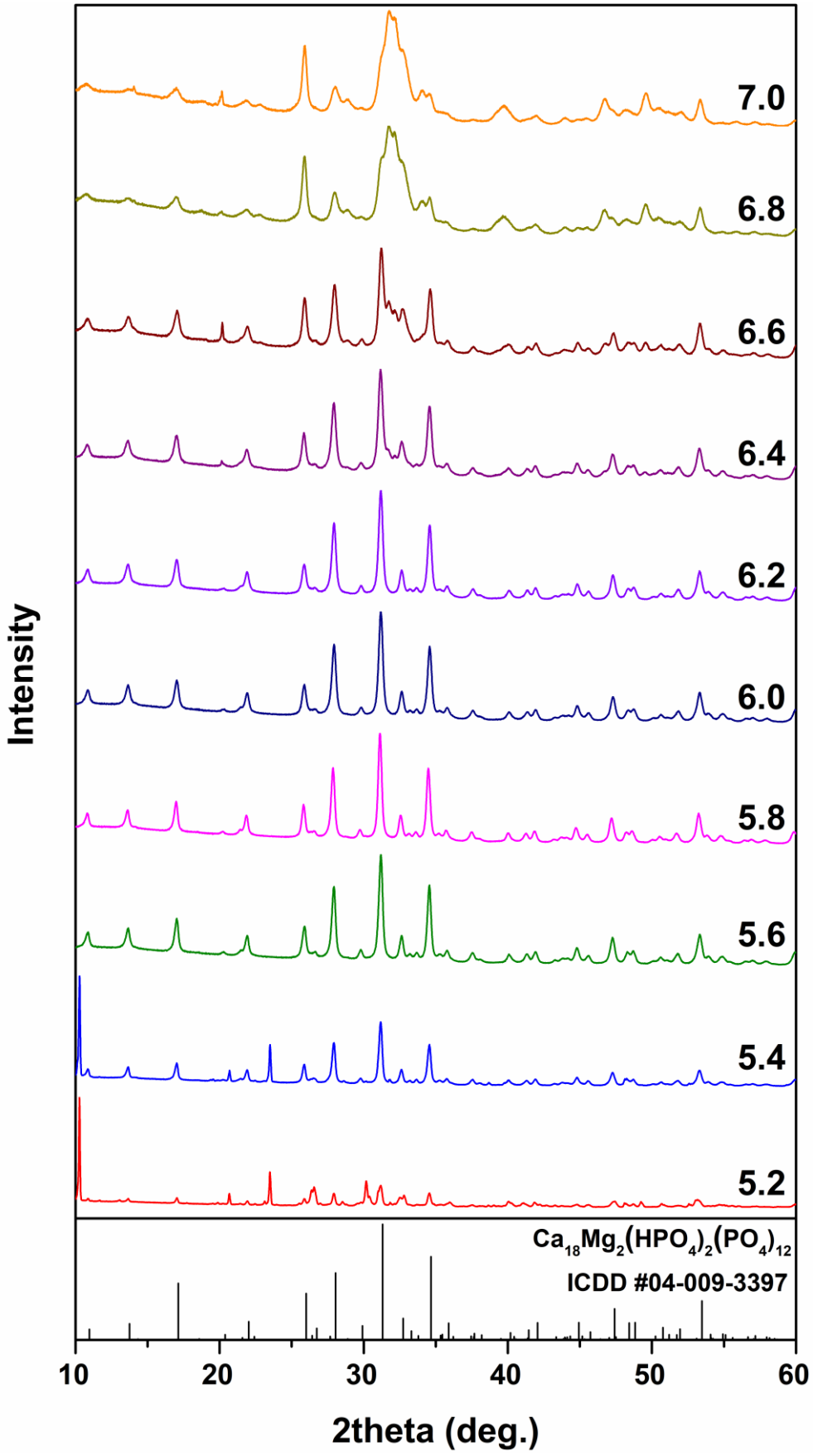

Figure S2. XRD patterns of synthesis products obtained at different pH values (t = 3h; T = 200 °C).

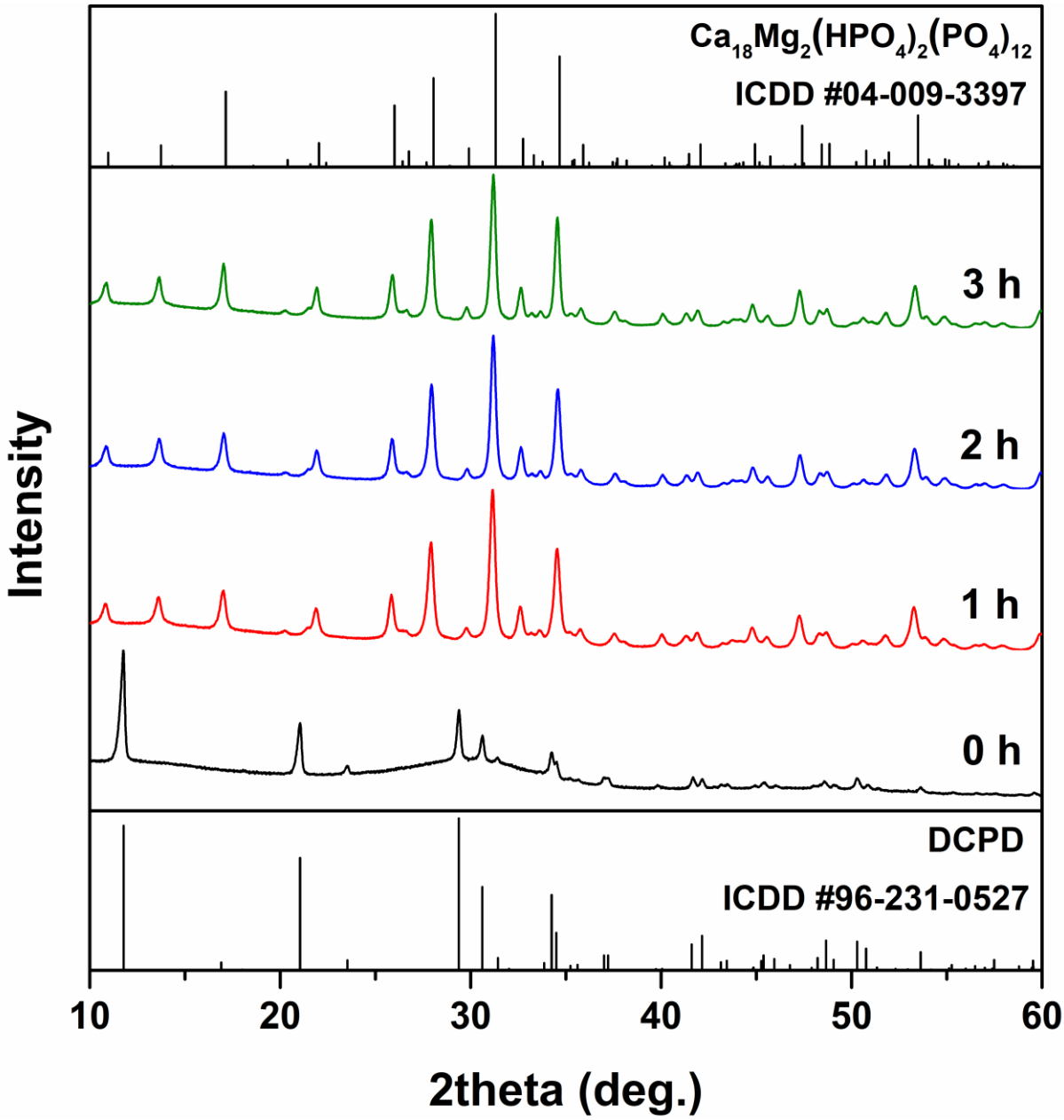

Figure S3. XRD patterns of synthesis products after different reaction times (pH = 5.8; T = 200 °C).

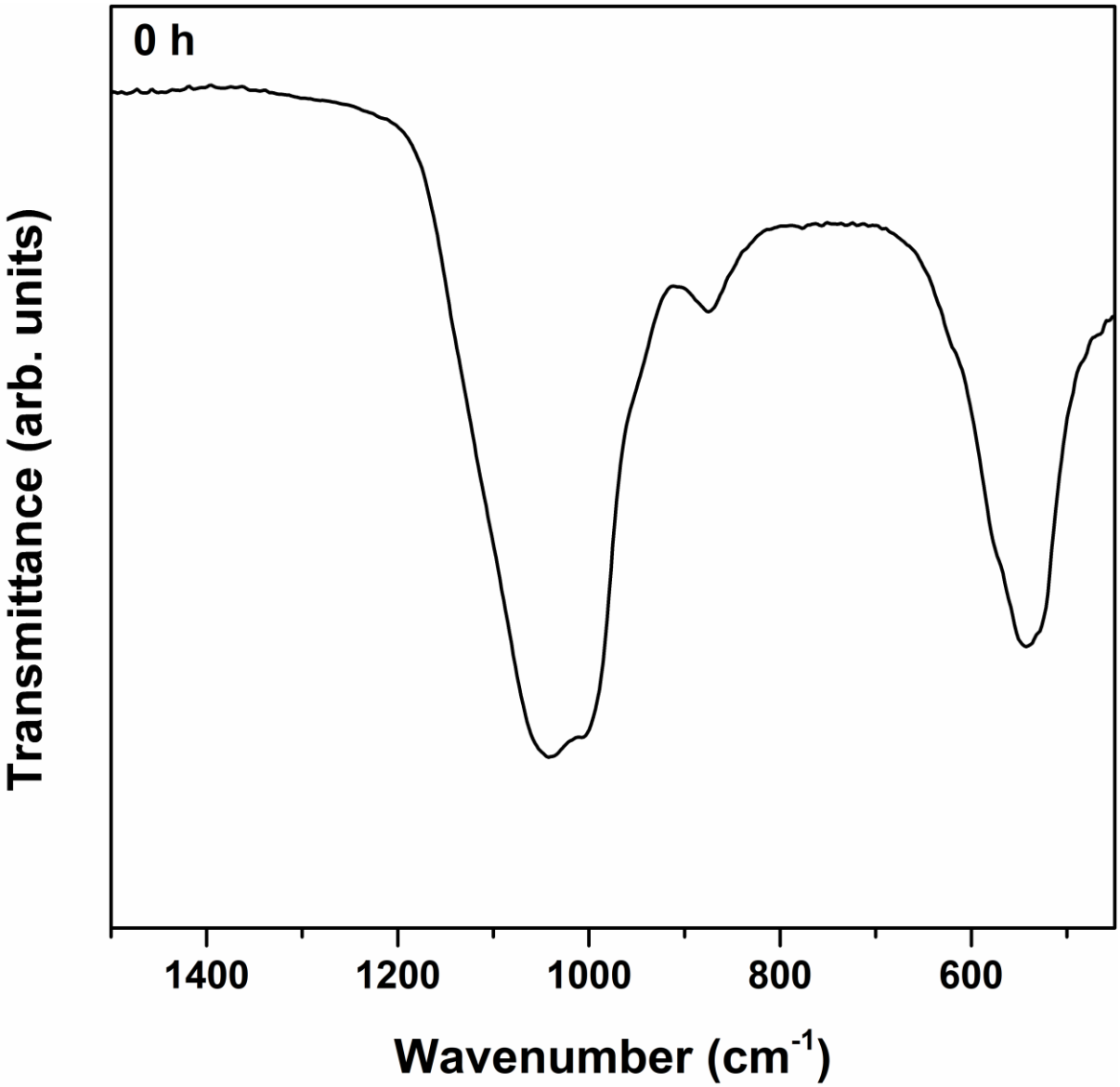

Figure S4. FTIR spectrum of as-precipitated powders.

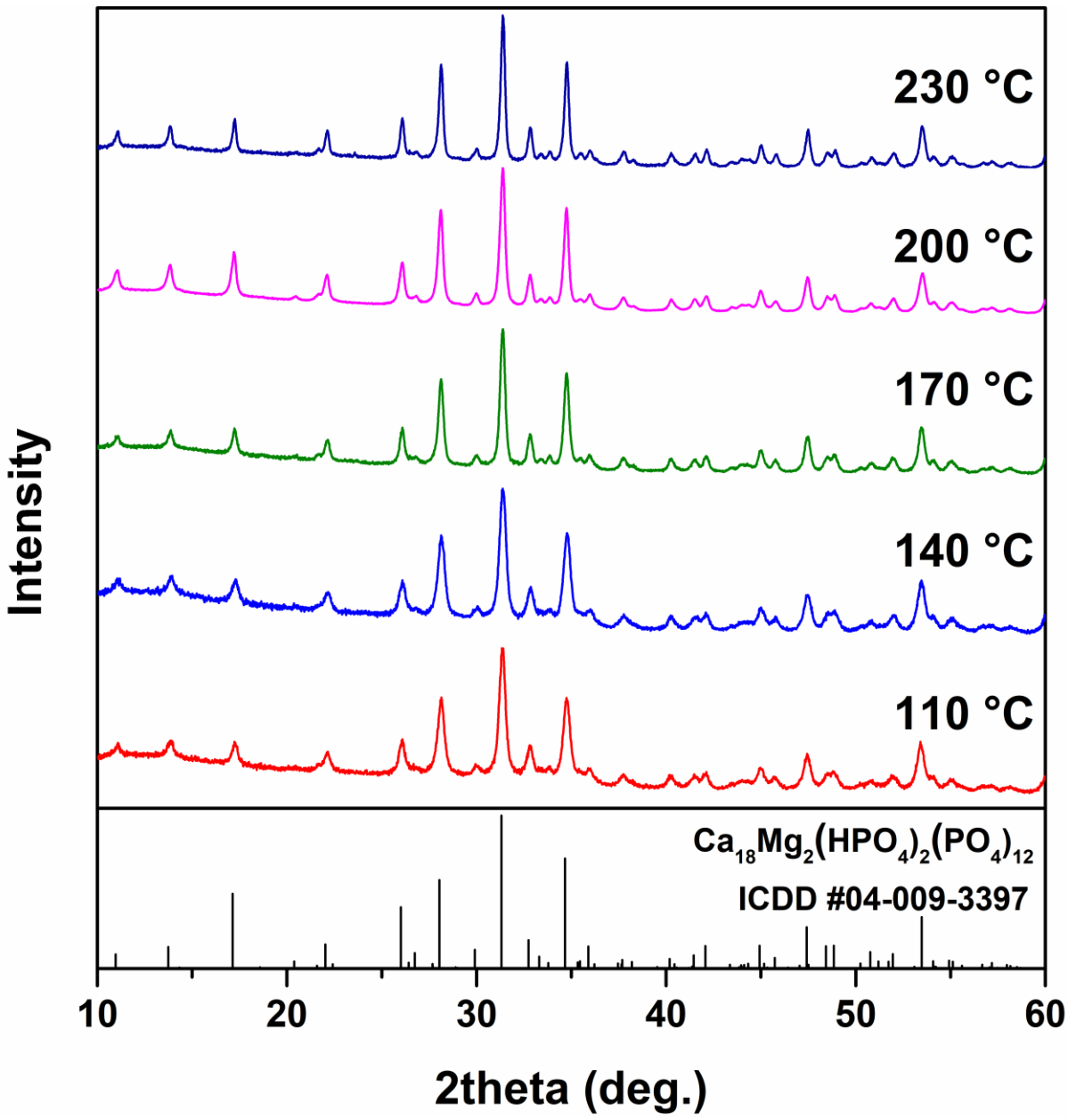

Figure S5. XRD patterns of synthesis products obtained at different reaction temperatures (pH = 5.8, t = 3 h).

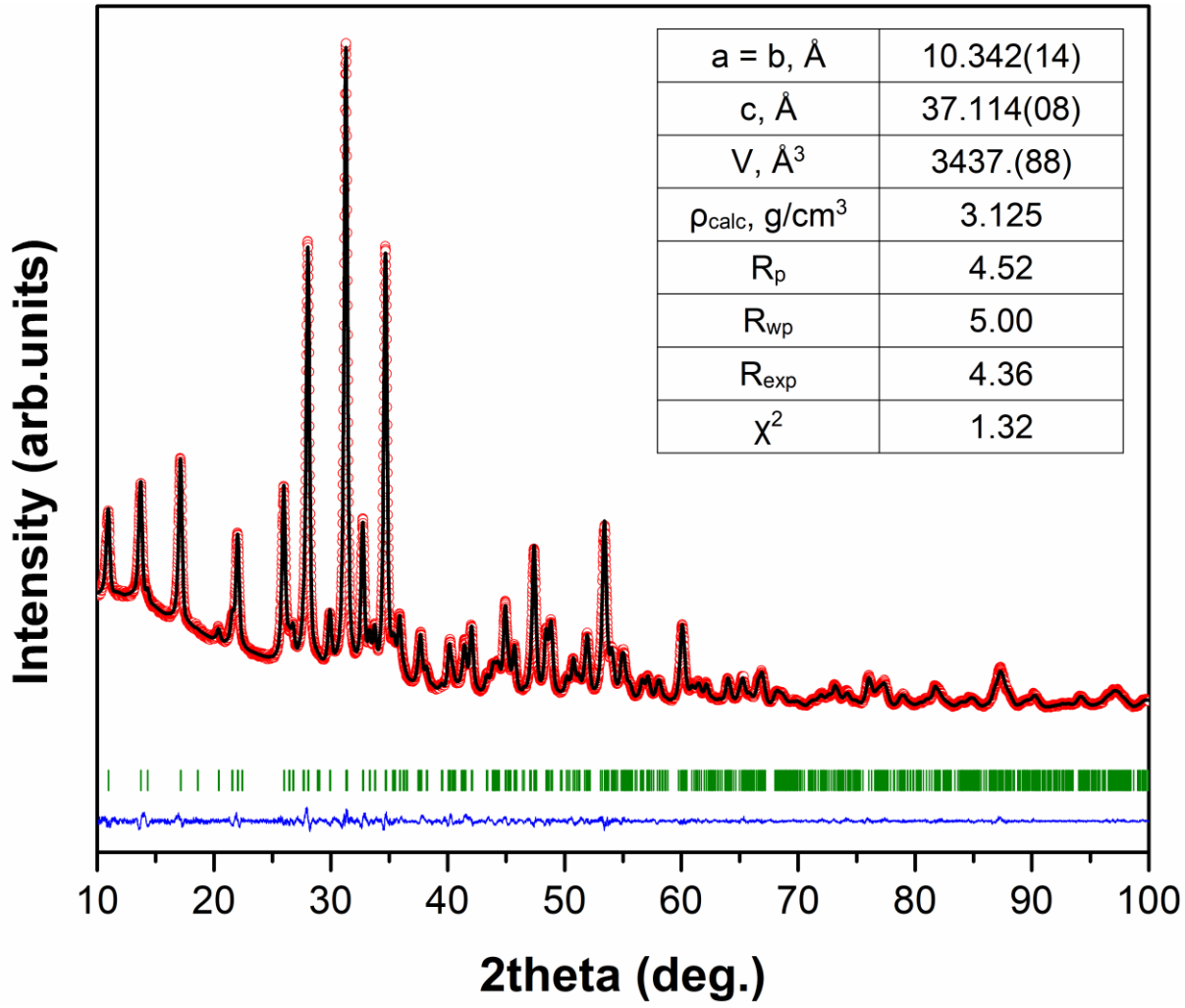

Figure S6. Rietveld refinement of the XRD data obtained for Zn-WH (T = 200°C; t = 3 h; pH = 5.8) refined in space group R3c. The red circle symbols and the black solid line represent the experimental and calculated intensities, respectively, and the blue line below is the difference between them. The green tick marks indicate the positions of the Bragg peaks.

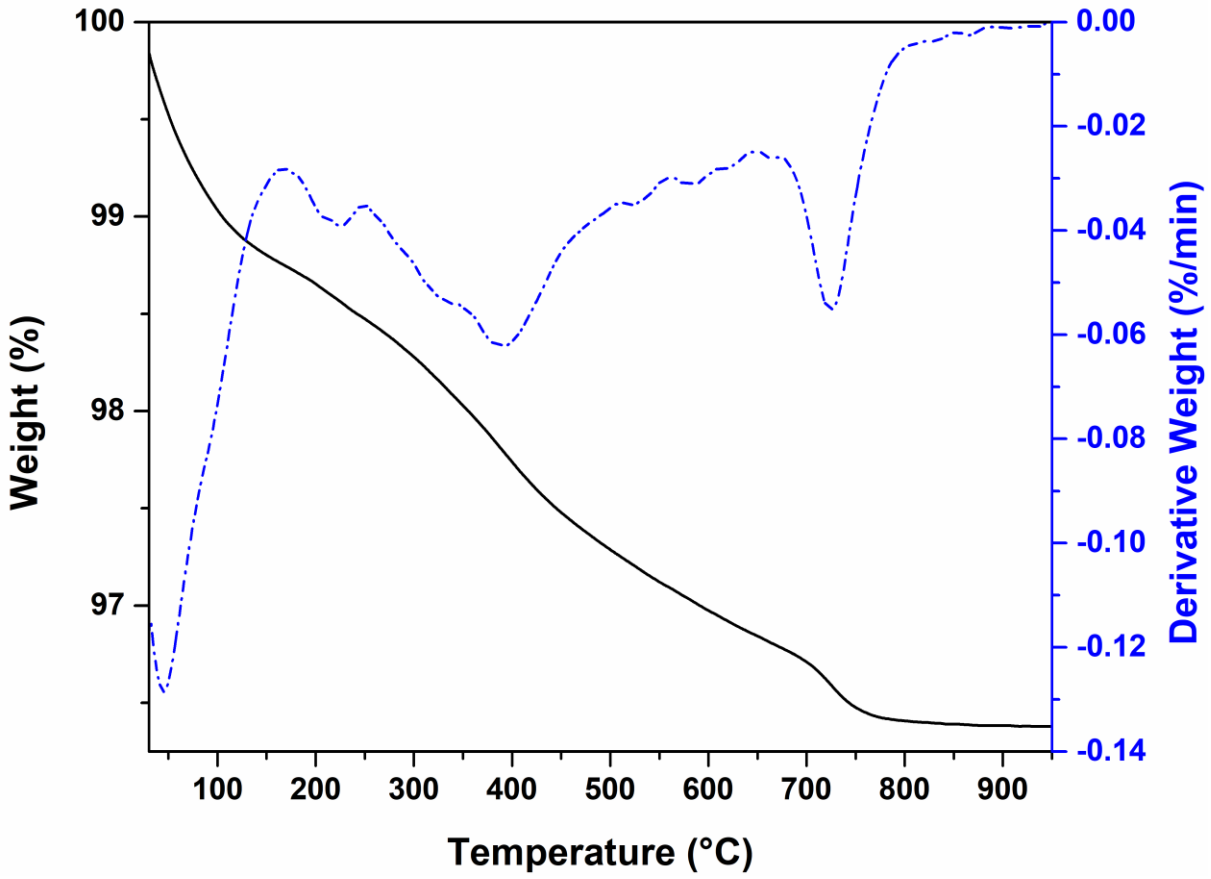

Figure S7. TG-DTG curves of Zn-WH (pH = 5.8, t = 3 h, T = 200 °C).

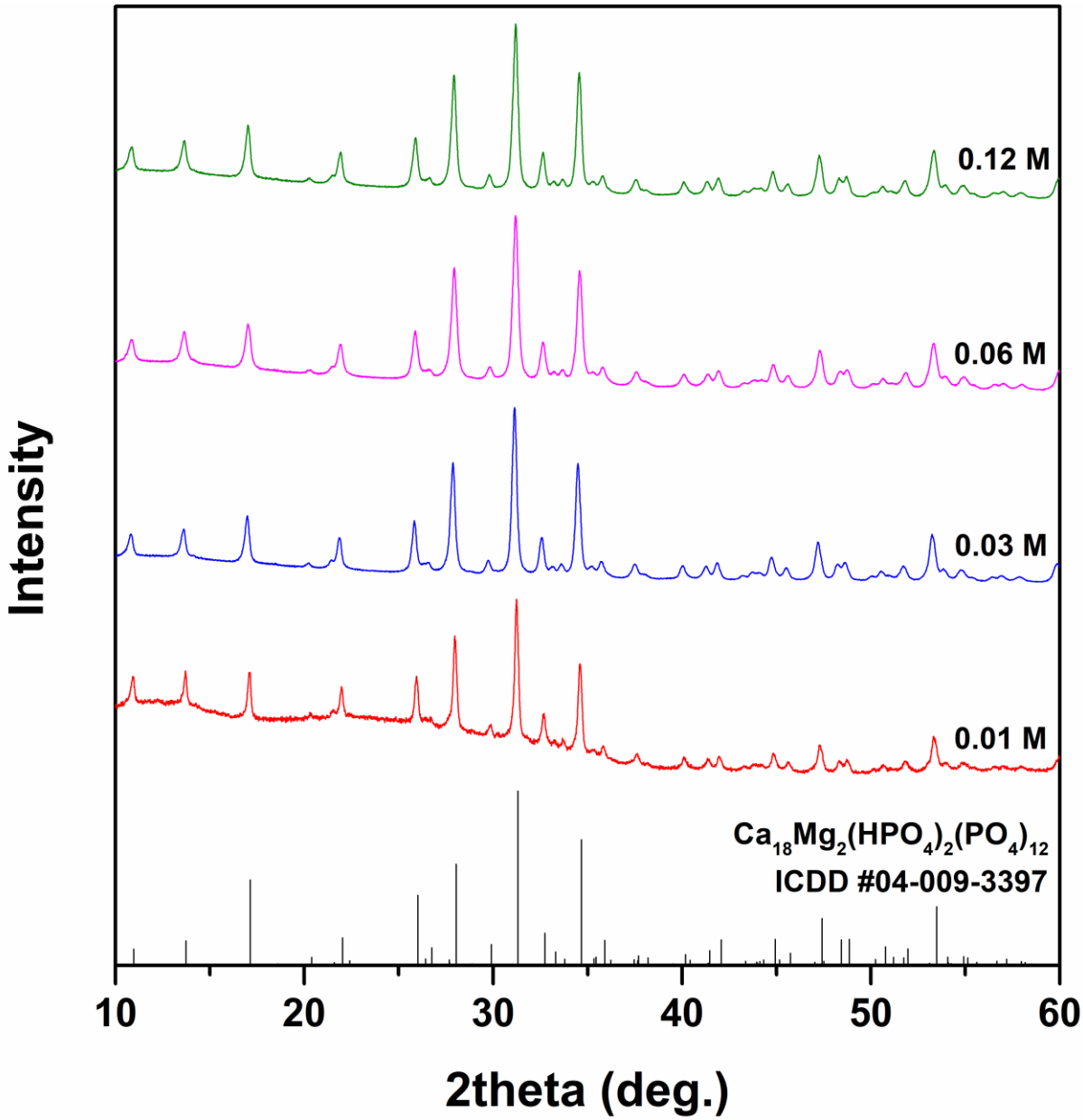

Figure S8. XRD patterns of synthesis products obtained with different concentrations of starting materials (pH = 5.8, t = 3 h, T = 200 °C).

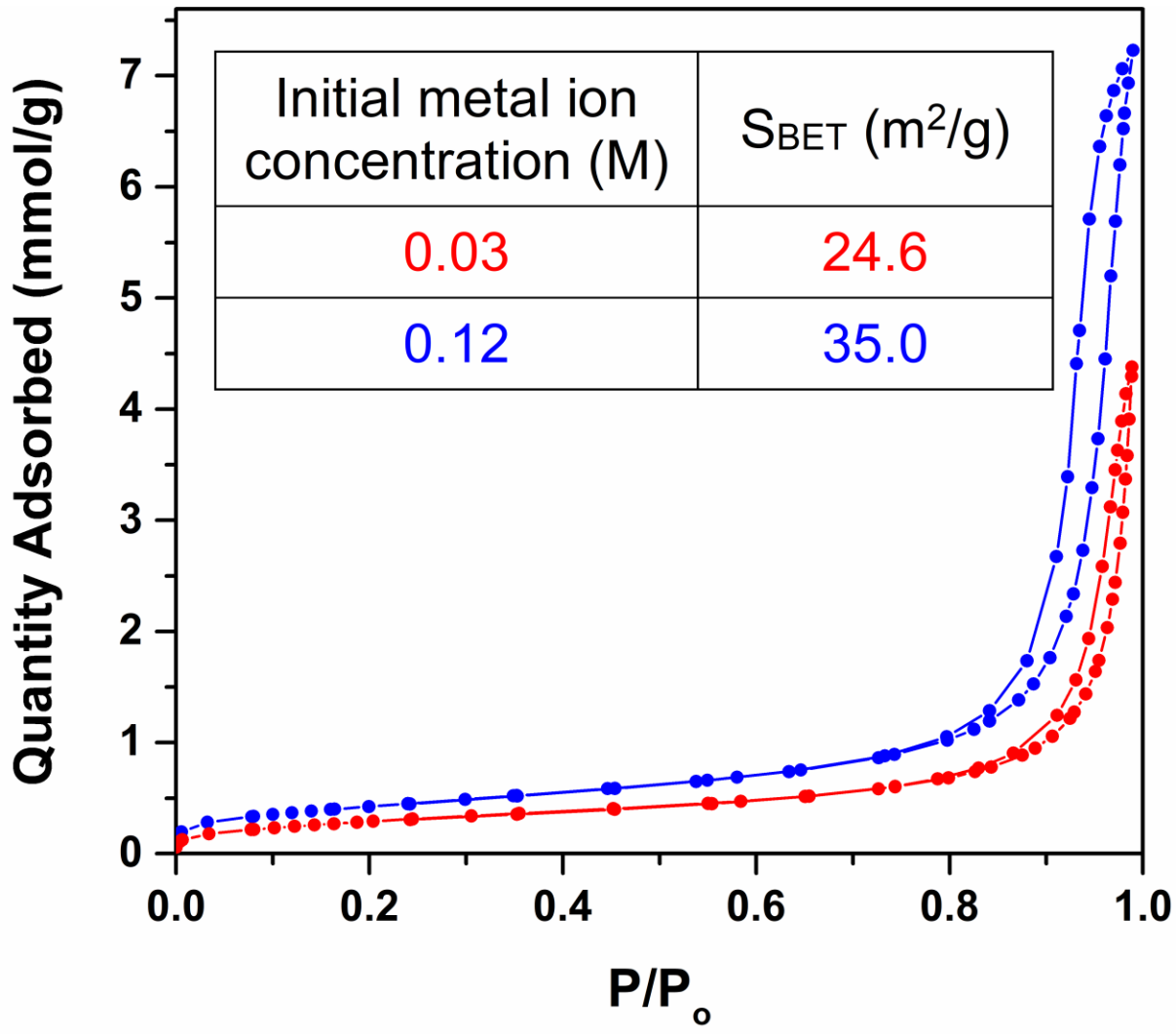

Figure S9. N_2 absorbtion-desorbtion isotherms of Zn-WH powders obtained with different total metal ion concentrations.

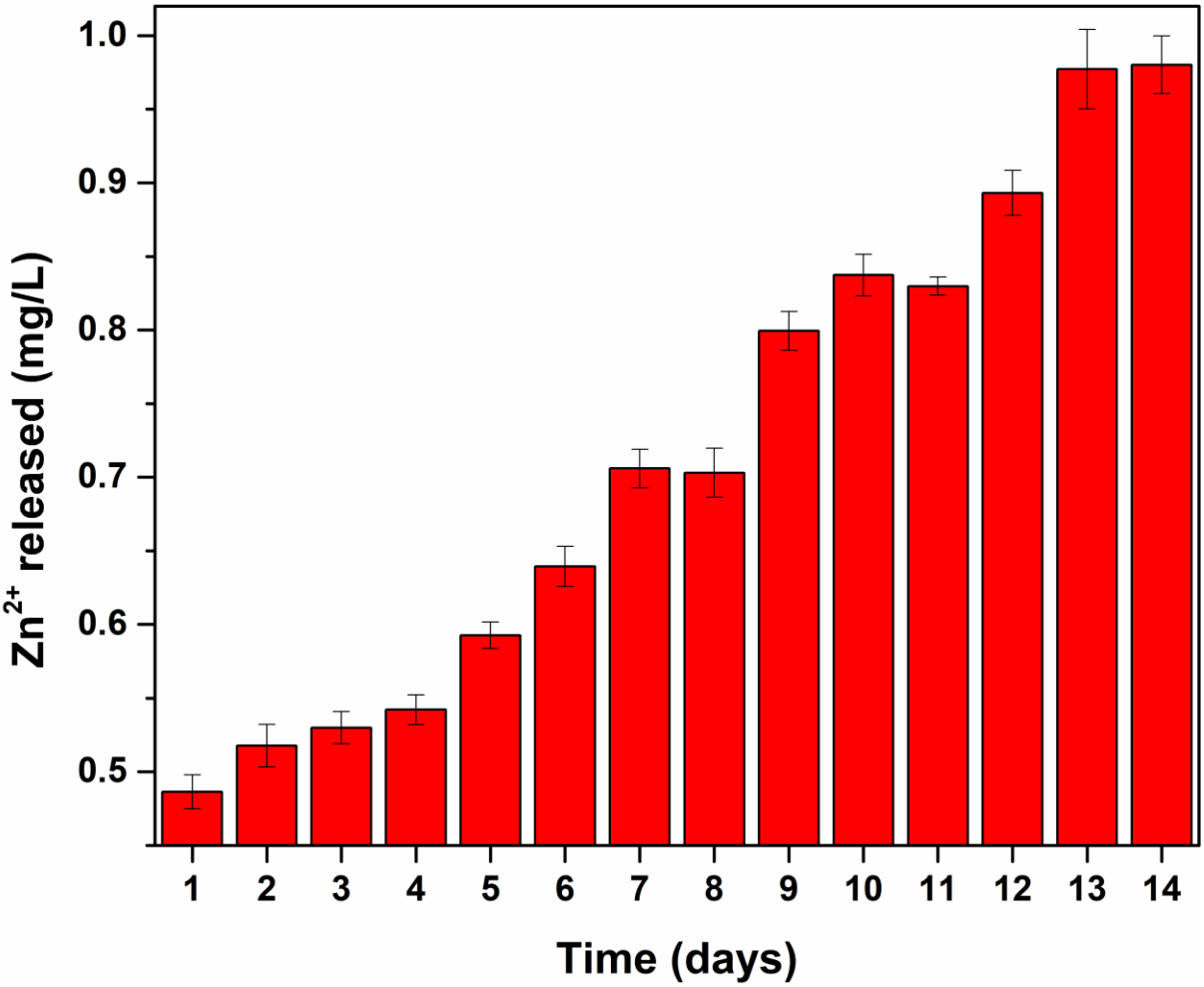

Figure S10. Zinc release in SBF solution.