

# Synthesis and Characterization of Layered Double Hydroxide Based on Zn and Cr Used for Anion Exchange

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## ABSTRACT

Layered double hydroxides (LDHs) have a layered structure with a host layer of octahedrally coupled metalcations and a guest layer (interlayer) of anions, which have recently been actively explored for their anion exchange capabilities. In this study, we used an anion exchange method to synthesize a LDH based on zinc and chrome  $ZnCr-CO_3$  ( $Zn_{0.6}Cr_{0.4}(OH)_2(CO_3)_{0.2}.nH_2O$ ) with different anions to deal with the exchange whereas the use of infrared spectroscopy and X-ray diffraction was essential to characterise, confirm the stability into LDH interlayers and the success of the anion exchange.

**Keywords:** LDH, anion exchange, X-ray diffraction, infrared spectroscopy.

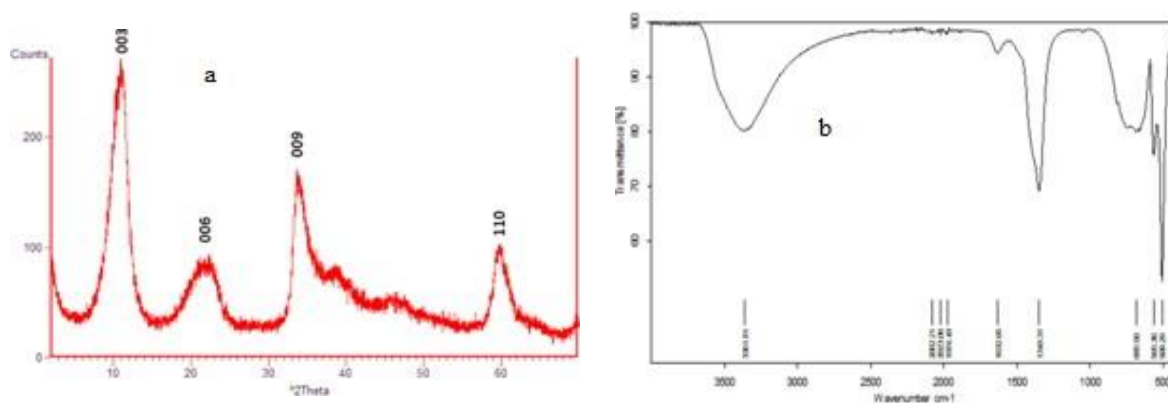


Fig a,b. Characterization by X-ray diffraction and infrared spectroscopy for the  $Zn_{0.6}Cr_{0.4}(OH)_2(CO_3)_{0.2}.nH_2O$

## References

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