

Generalized Methodology for Inserting Metal Heteroatoms into the Layered Zeolite Precursor RUB-36 by Interlayer Expansion

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Synthesis

In a typical example for synthesis of Zn-JHP-1, 0.2 g RUB-36 zeolite, 10 ml HCl (1 M) and 0.026 g Zn(acac)₂Cl₂ were stirred for 4 hours at room temperature. The mixture was then transferred into a stainless steel reaction vessel, sealed and heated at 180 °C for 24 h. After filtration and drying, the white power could be obtained, which was named as Zn-JHP-1. After the calcination at 550 °C for 5 h, the final product could be obtained, which was named as Zn-JHP-2.

Similarly, the above-described procedure was employed for synthesis of Fe-JHP-1, using 0.2 g RUB-36 zeolite, 10 ml HCl (0.5 M) and 0.02 g Fe(acac)₃. The final product was named as Fe-JHP-2.

Finally, the same procedure was used for synthesis of Co-JHP-1, using 0.2 g RUB-36 zeolite, 10 ml HCl (1 M) and 0.015 g Co(acac)₂. The final product was named as Co-JHP-2.

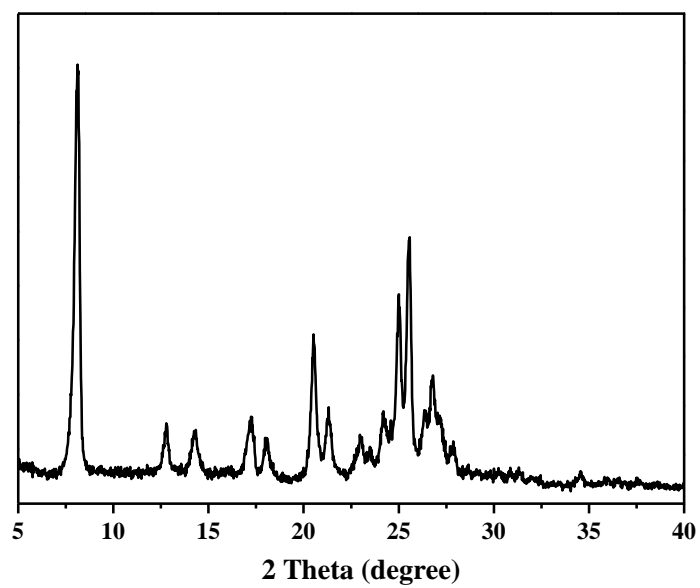


Figure S1 XRD pattern of Sn-JHP-2-r.