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Post-synthetic metal exchange on an amine-functionalized zinc coordination polymer for hydrogen sulfide capture

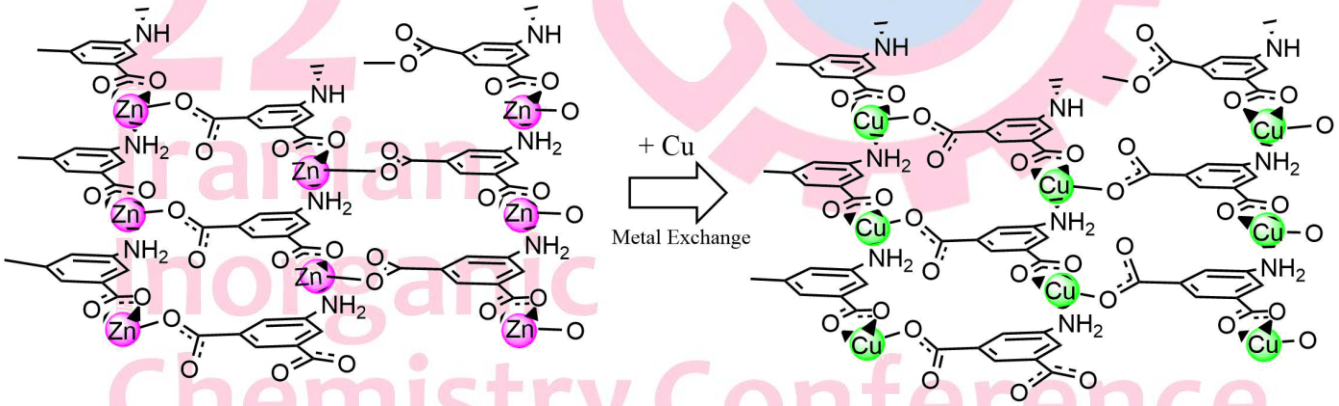
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Tandem post-synthetic modification is an interesting approach for improving the properties of coordination polymers. In this work, we report surface functionalization by amine group under ultrasonic condition and tandem post-synthetic metal-exchange (PSE) on zinc coordination polymer (Zn-CP). During the metal exchange process Cu^{2+} ions were replaced by Zn^{2+} ions in methanol . Due to the existence of two suitable sites in the obtained product, i.e. copper metal nodes and amine surface functional groups, it acquires the ability to enhance the hydrogen sulfide (H_2S) capture [1-3].

Keywords: Post-synthetic modification, Metal exchange, Functionalization, Metal-organic framework, H_2S capture.



Scheme 1. Post-synthetic metal exchange approach

References

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