

Epoxidation of propylene with reusable modified heteropoly acids

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Heteropoly acid is suitable for green chemistry but to overcome the weak point of HPA, well dissolved in water, and make a sustainable catalyst, we tried to synthesize modified HPA with organic materials. After synthesis, modified HPAs were characterized by FT-IR, XRD, FE-SEM, TG. The catalytic activity were evaluated by the epoxidation of propylene to propylene oxide with hydrogen peroxide.

Modified HPAs showed higher thermal stability and yield than parent HPAs. With some additive modified HPAs showed higher yield. Modified HPAs showed reusability without degradation of the catalyst.