

Design of Pt/SAPO-11 bifunctional catalysts with superior metal-acid balance constructed via a novel one-step pre-loading strategy for enhancing *n*-dodecane hydroisomerization performance

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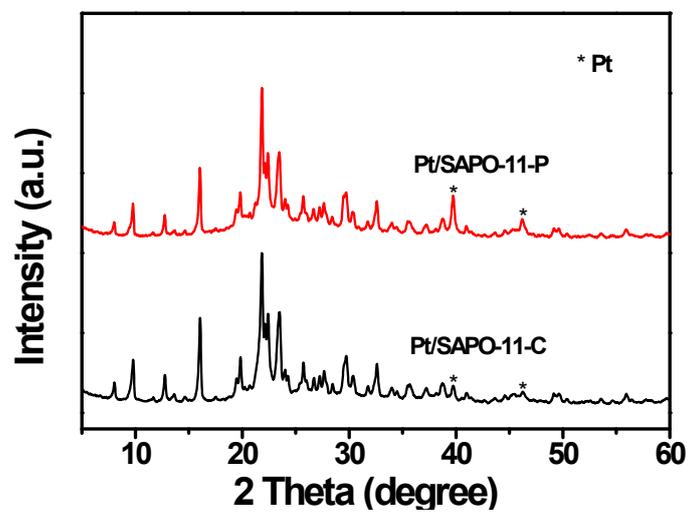


Figure S1. XRD patterns of the Pt/SAPO-11-C and Pt/SAPO-11-P catalysts.

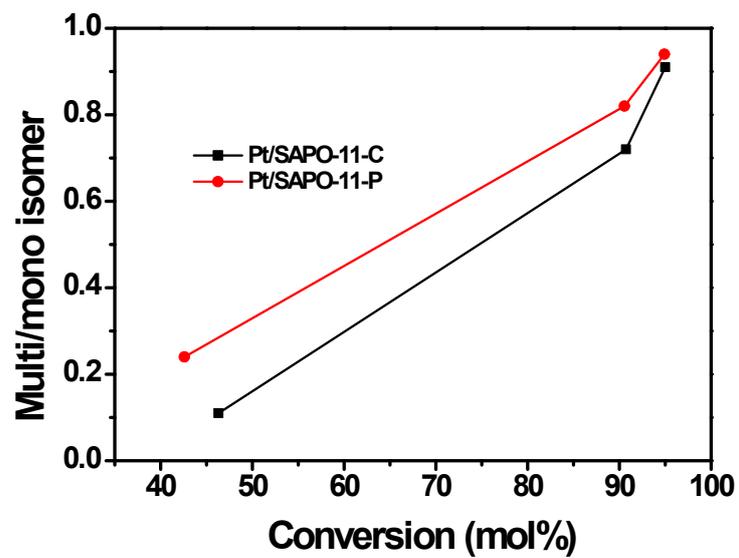


Figure S2 Multi/mono branched isomer of the Pt/SAPO-11-C and Pt/SAPO-11-P catalysts obtained from the GC-MS analysis.

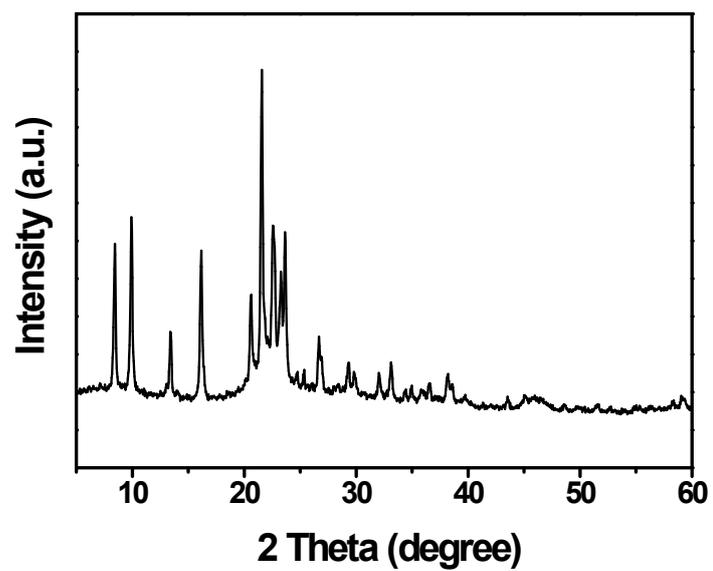


Figure S3. XRD pattern of SAPO-11-T crystallized in the controlled experiment.

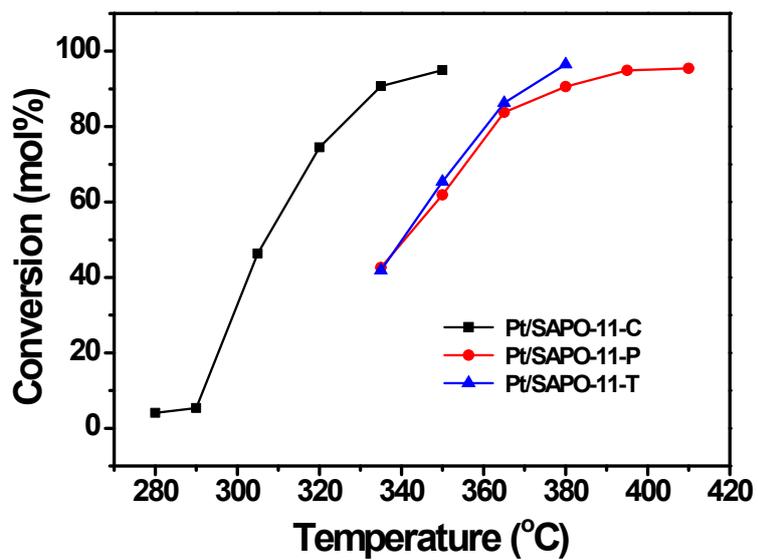


Figure S4 The conversion of n-dodecane versus temperature over the three catalyst.

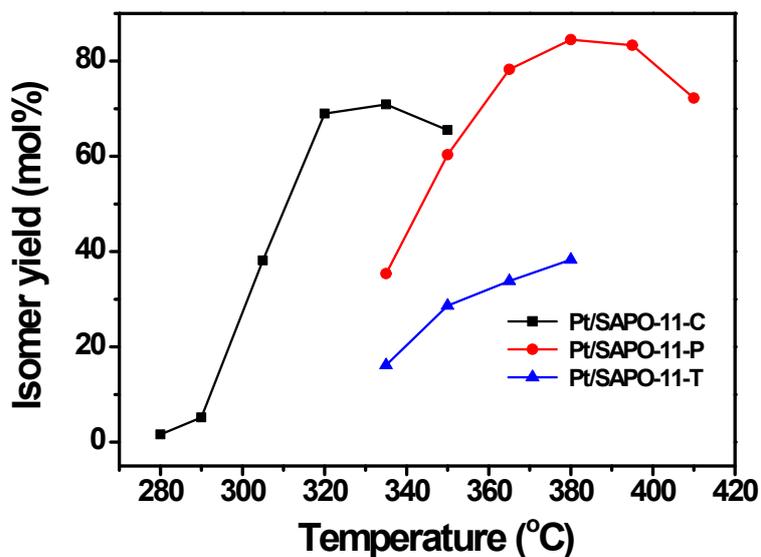


Figure S5 The isomer yield of n-dodecane versus temperature over the three catalyst.

And the prepared Pt/SAPO-11-T catalyst demonstrates lower activity than Pt/SAPO-11-C and similar with the Pt/SAPO-11-P catalyst. But it shows much less isomer yield than Pt/SAPO-11-C and Pt/SAPO-11-P catalysts, displayed in Figure S3 and S4. Hence, it can be concluded that SiO₂ pretreated at high temperature results in the decrease of the acidic property and cannot improve the (de)hydrogenation characteristic of Pt nanoparticle.