

Supporting Information

Olefin Metathesis over Supported MoO_x catalysts: Influence of the Oxide Support

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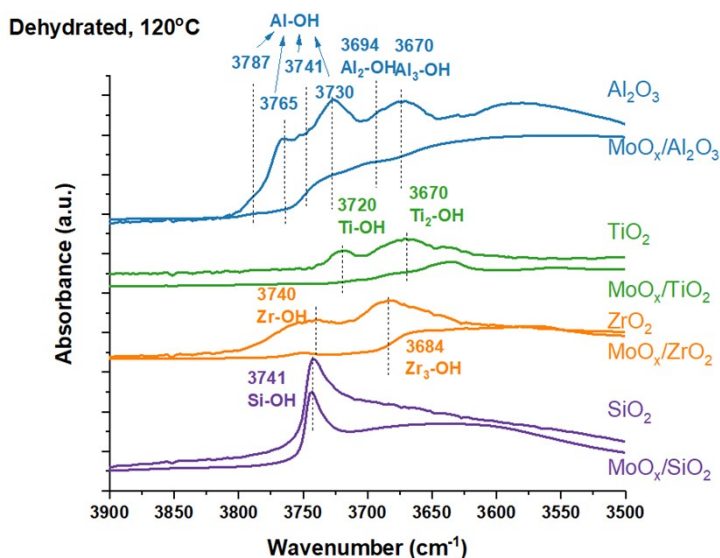


Figure S1. *In situ* DRIFTS spectra of the surface hydroxyl region of the Mo-free oxide supports and supported MoO_x catalysts under dehydrated conditions.

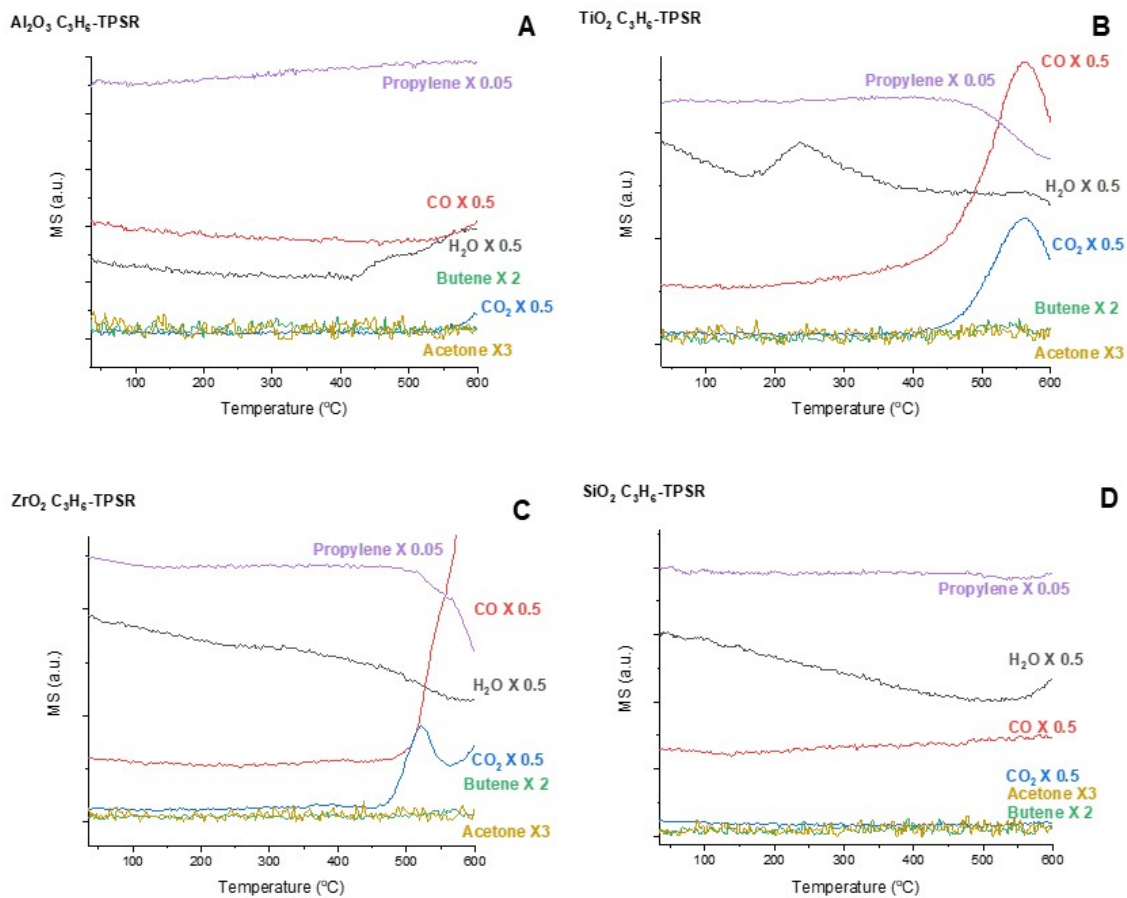


Figure S2. Propylene-TPSR (30-600°C) with online MS for the Mo-free oxide supports: (A) Al₂O₃, (B) TiO₂, (C) ZrO₂, (D) SiO₂.

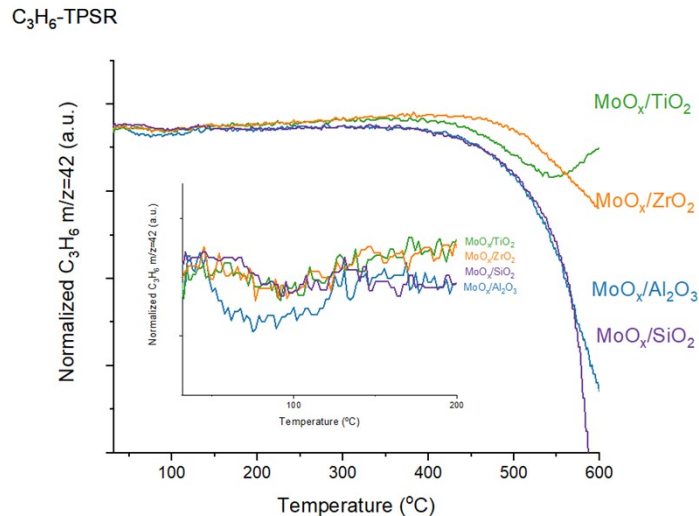


Figure S3. Normalized C_3H_6 spectra during Propylene-TPSR (30-600°C) with online MS for the supported MoO_x catalysts. The C_3H_6 signals ($m/z=42$) were normalized with the Ar signal ($m/z=20$).

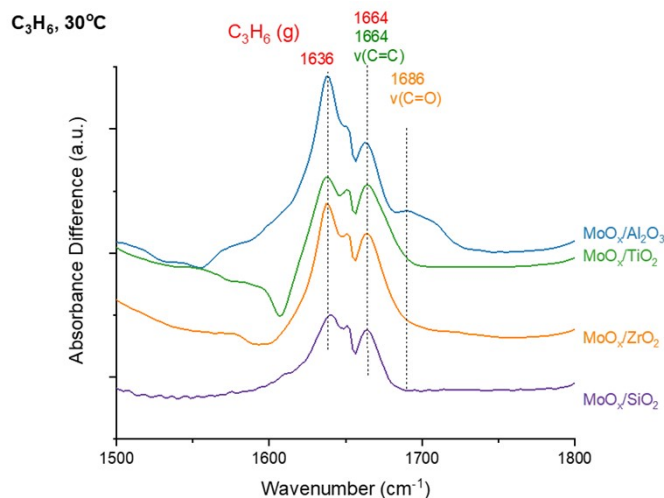


Figure S4. *In situ* DRIFTS difference spectra of supported MoO_x catalysts after propylene adsorption at 30°C for 30min. The spectra of dehydrated MoO_x catalysts at 30°C were subtracted from the spectra of the corresponding MoO_x catalysts after propylene adsorption at 30°C

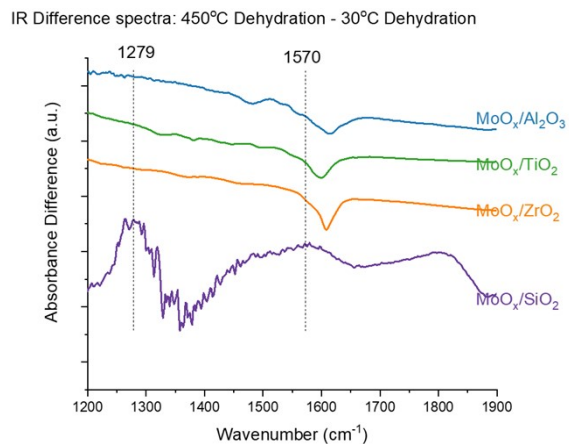


Figure S5. *In situ* DRIFTS difference spectra of supported MoO_x catalysts under dehydrated conditions. The spectra of the dehydrated supported MoO_x catalysts at 30°C were subtracted from the spectra of the corresponding dehydrated supported MoO_x catalysts at 450°C.

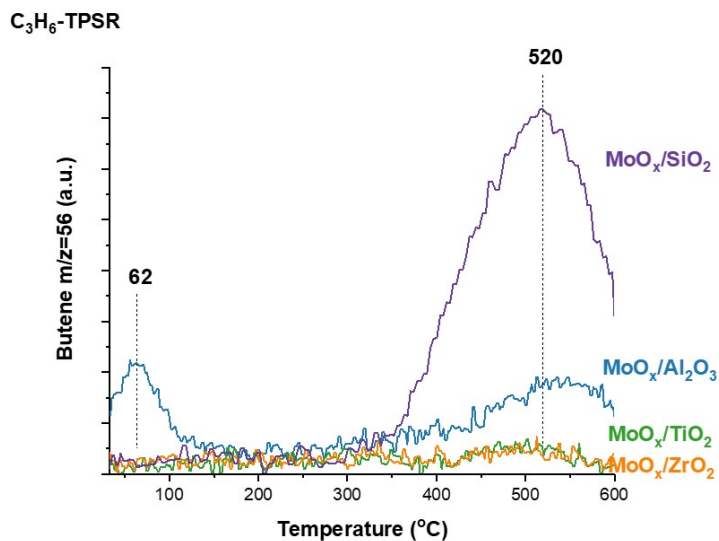


Figure S6. Butene MS signal during Propylene-TPSR (30-600°C) for the supported MoO_x catalysts.