

Dehydration of Isopropanol over Silica-Supported Heteropoly Acids

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Supplementary Materials

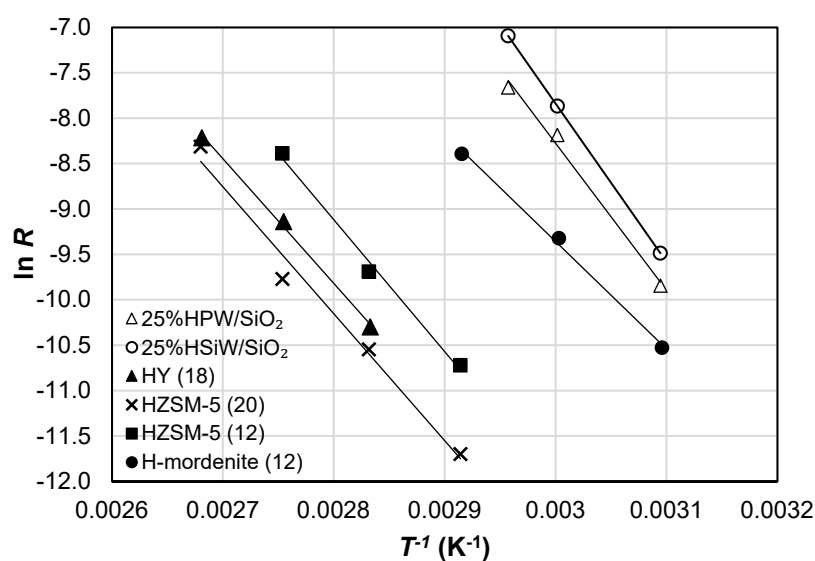


Figure S1. Arrhenius plots for i-PrOH dehydration over zeolites and 25%HPA/SiO₂ catalysts (rate R in mol g⁻¹h⁻¹, 50–100 °C temperature range, 0.20 g catalyst, 0.95 kPa i-PrOH partial pressure, $W/F = 422$ g h⁻¹mol⁻¹ for zeolites and 281 g h⁻¹mol⁻¹ for 25%HPA/SiO₂).

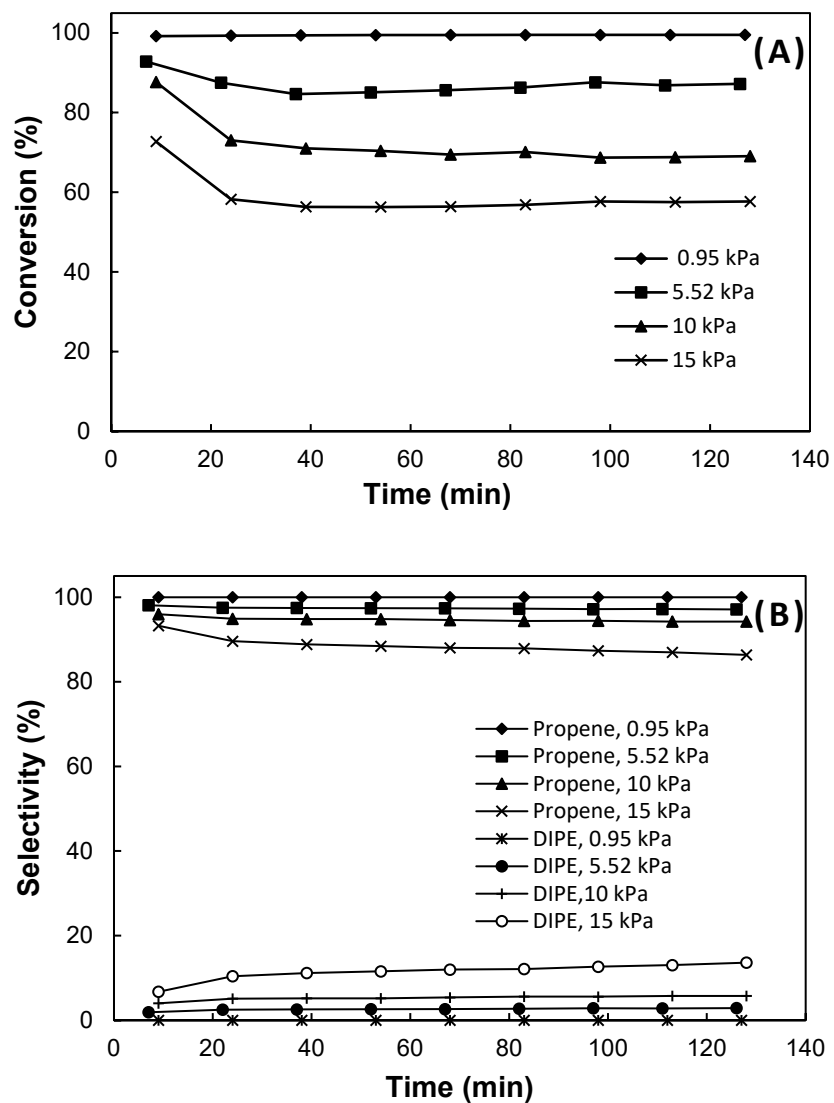


Figure S2. Effect of i-PrOH partial pressure on (A) i-PrOH conversion and (B) product selectivity over 25%HPW/SiO₂ catalyst (0.20 g) at 100 °C, 20 ml min⁻¹ N₂ flow rate.

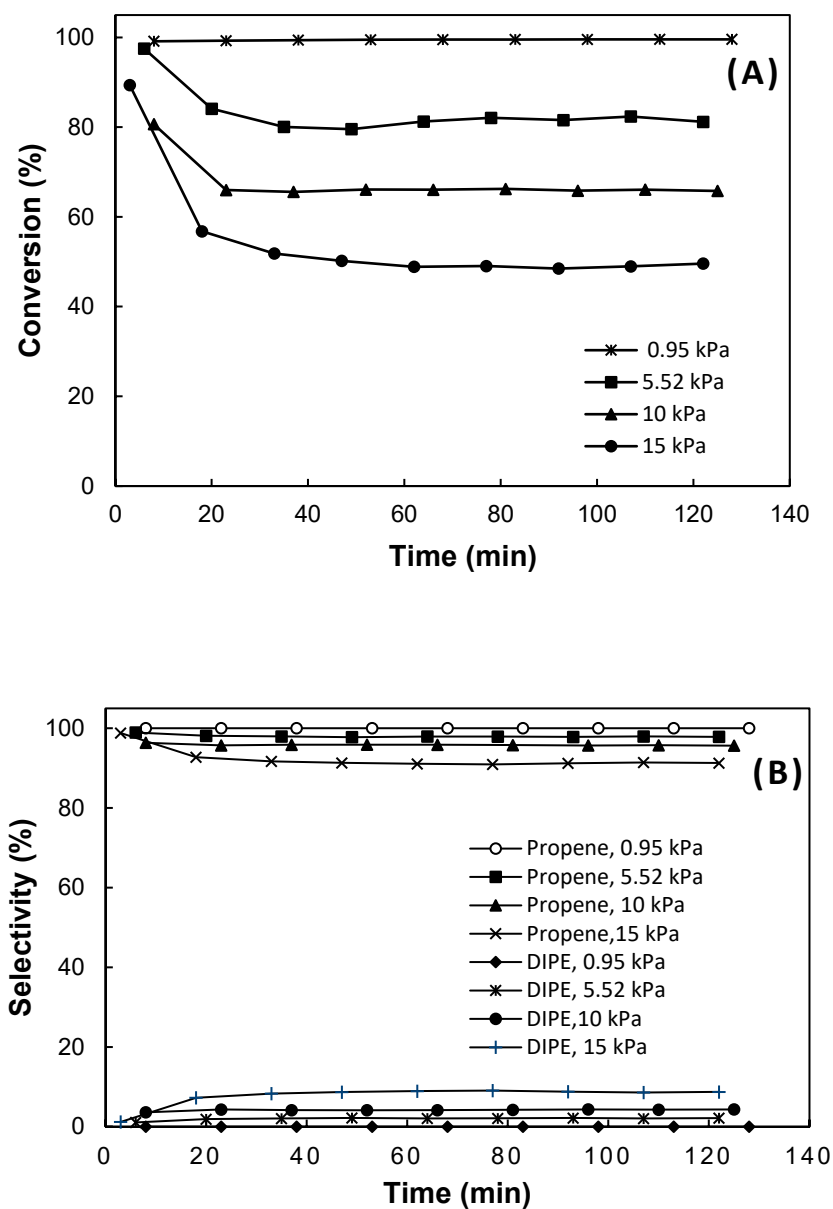


Figure S3. Effect of i-PrOH partial pressure on (A) i-PrOH conversion and (B) product selectivity over 25%HSiW/SiO₂ catalyst (0.20 g) at 100 °C, 20 ml min⁻¹ N₂ flow rate.

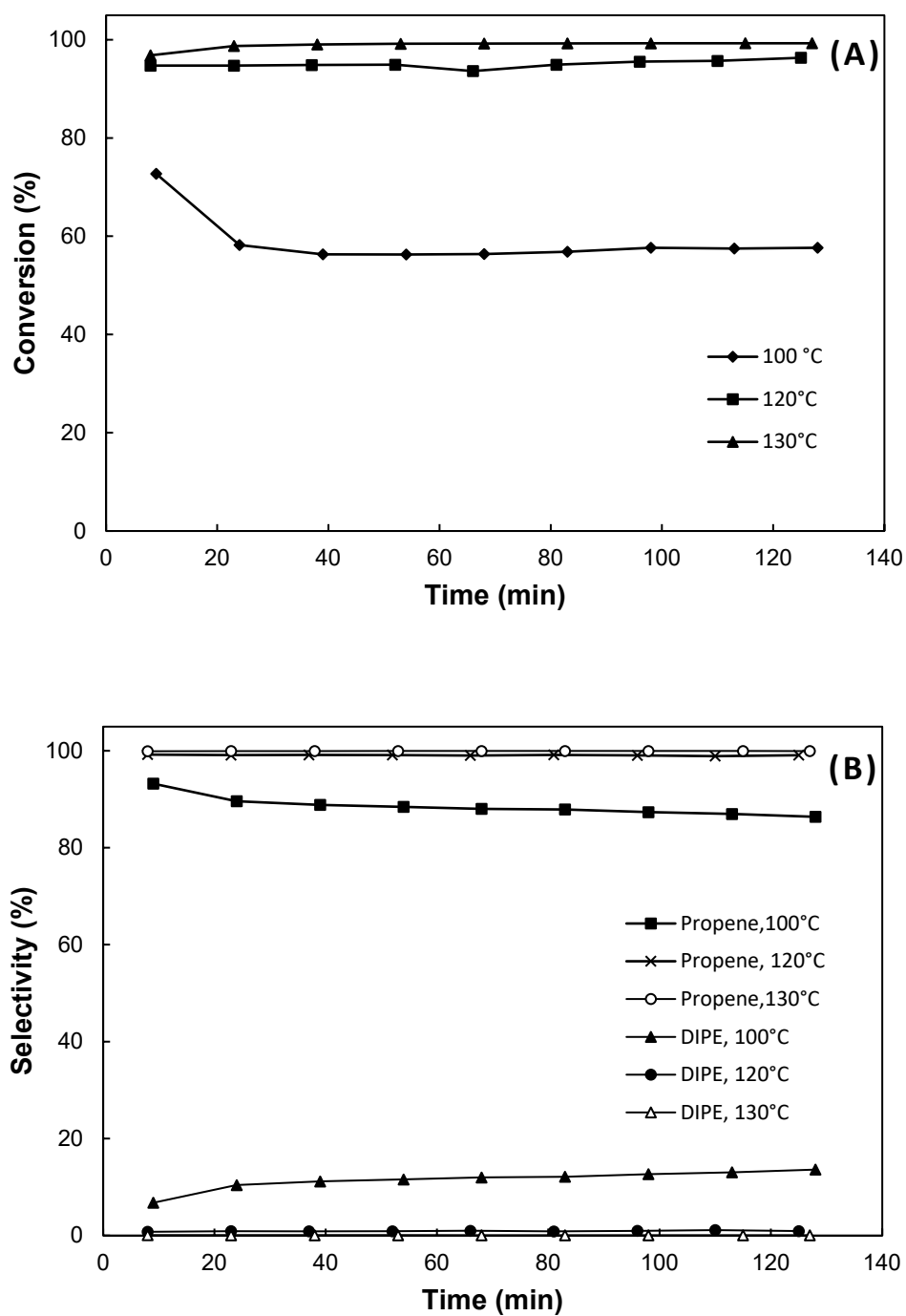


Figure S4. Effect of temperature on i-PrOH conversion (A) and product selectivity (B) over 25%HPW/SiO₂ catalyst (0.20 g) at 15 kPa i-PrOH partial pressure, 20 mL min⁻¹ N₂ flow rate, contact time W/F = 27 g h mol⁻¹.