

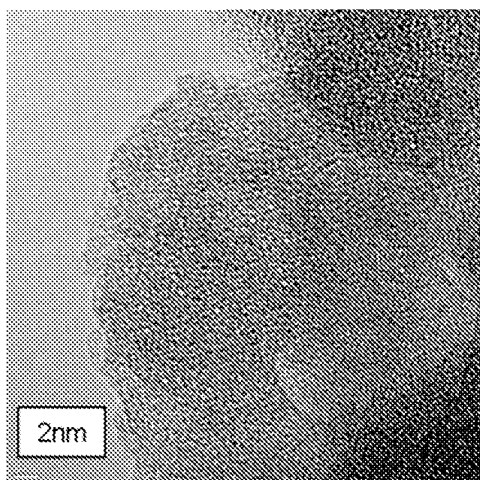


Figure 1: HRTEM images of Example 5 (monomeric Zr).

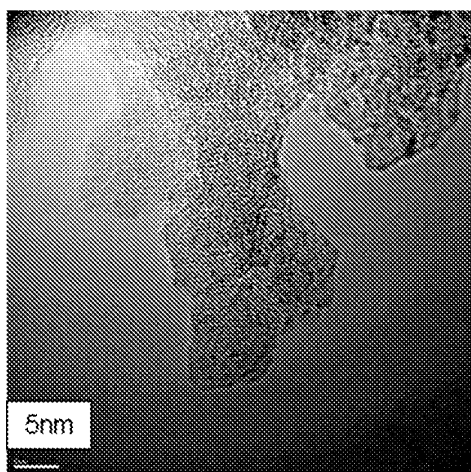


Figure 2: HRTEM images of Example 7 (monomeric Zr).

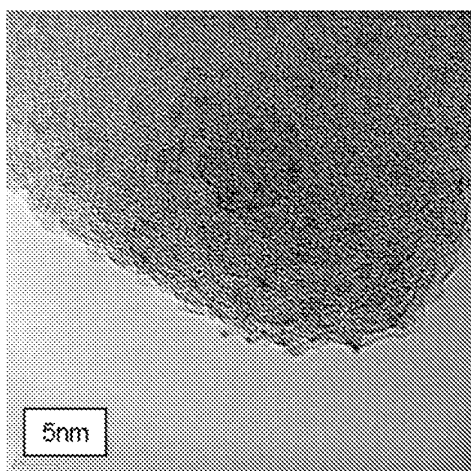


Figure 3: HRTEM images of Example 14 (trimeric Zr).

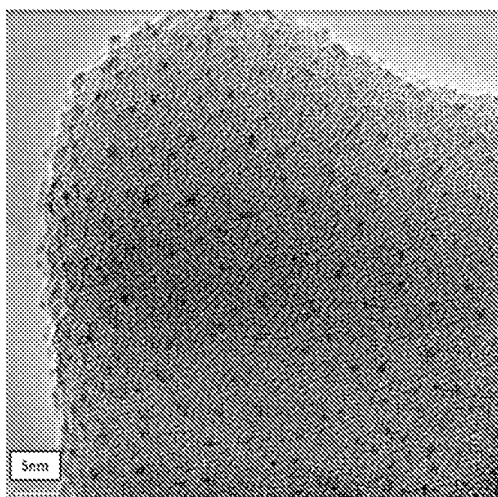


Figure 4: HRTEM images of Example 15 (pentameric Zr).

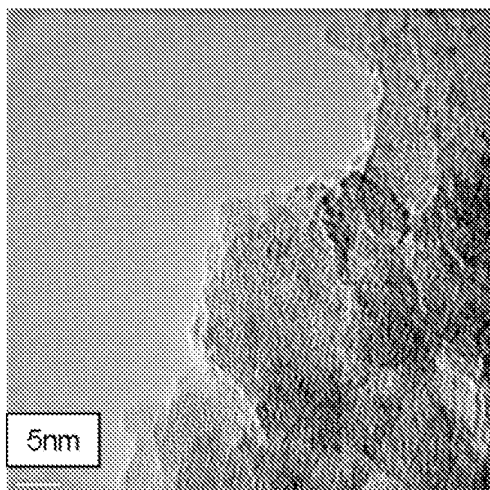


Figure 5 HRTEM images of Example 17 (monomeric Hf).

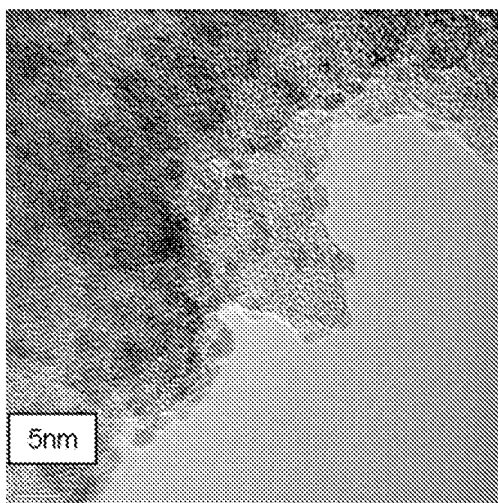


Figure 6: HRTEM images of Example 18 (trimeric Hf).

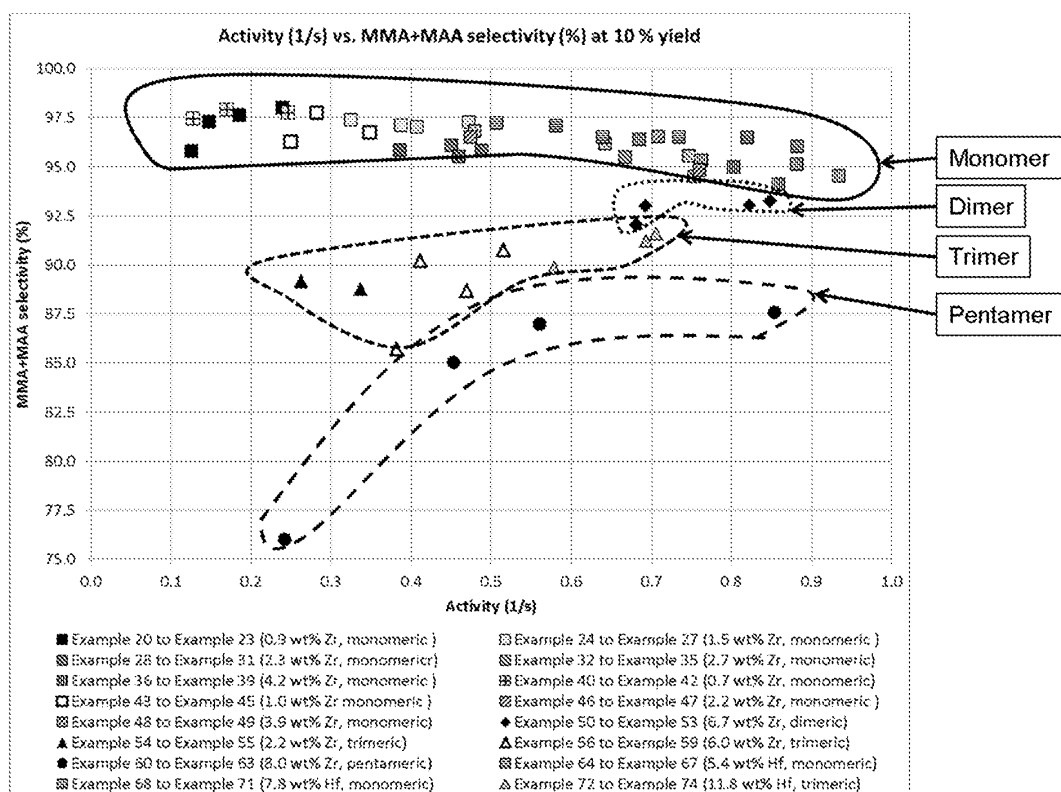


Figure 7: MMA+MAA selectivity (%) vs. Activity (1/s) at 10% yield for the catalysts described in Example 20 to Example 74.

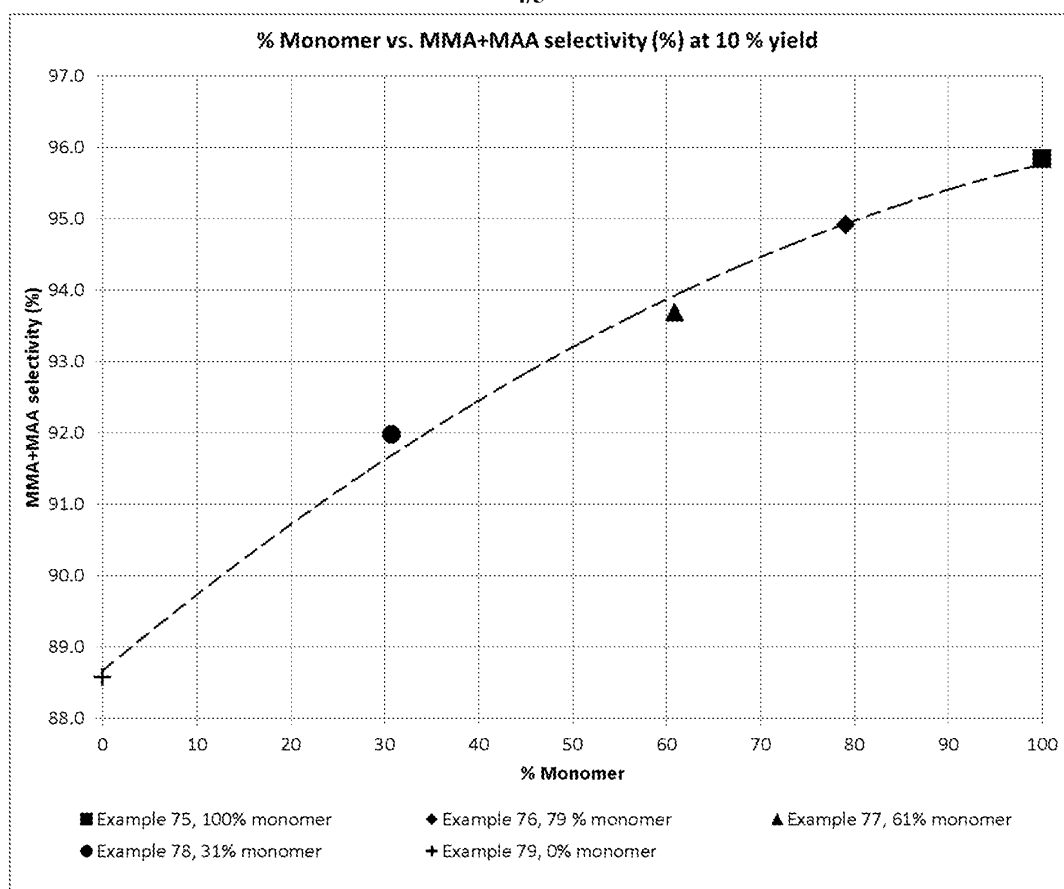


Figure 8: MMA+MAA selectivity (%) vs monomer content (%) based on Zr content for Example 75 to Example 79.

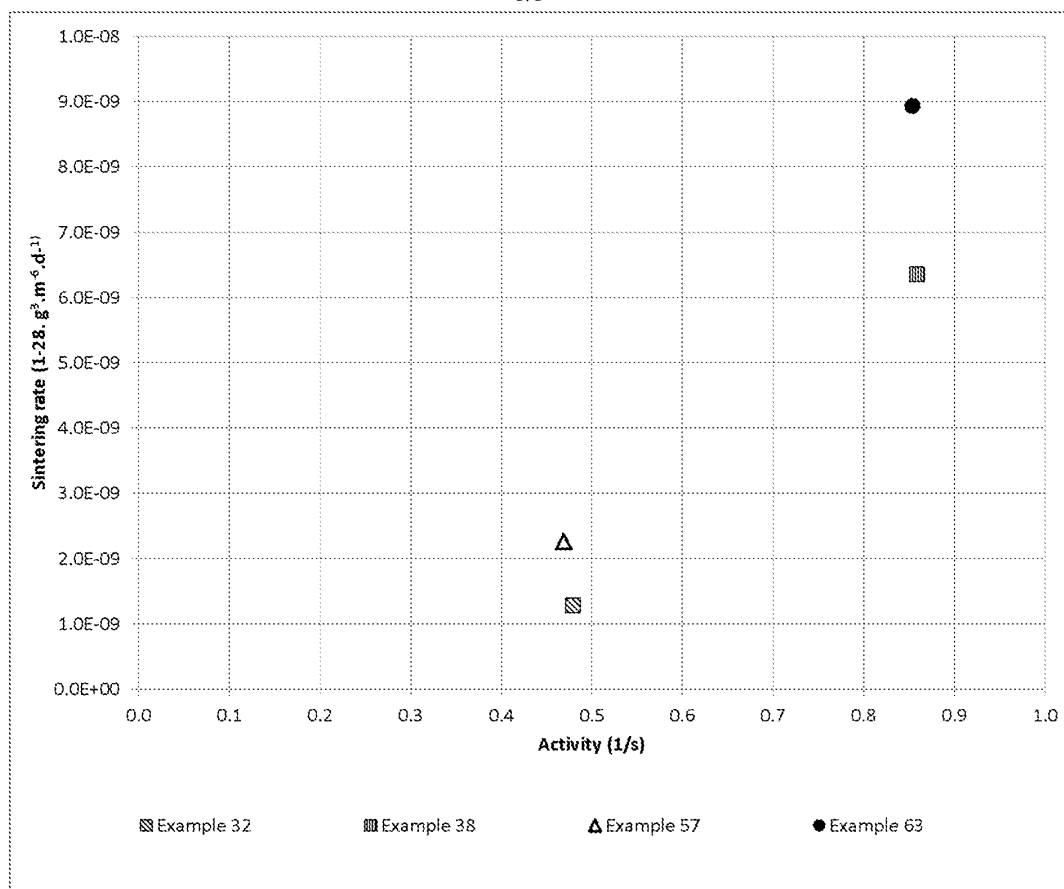


Figure 9: Sintering rate ($\text{g}^3 \cdot \text{m}^{-6} \cdot \text{d}^{-1}$) vs. catalyst activity ($1/\text{s}$) for monomeric, trimeric and pentameric Zr catalysts.