## **Supporting information**

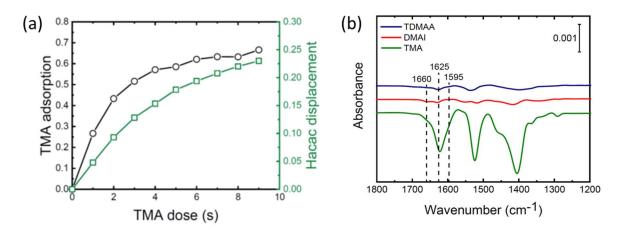


Figure 1. (a) Normalized TMA adsorption and acetylacetone (Hacac) displacement fraction as a function of TMA dose, (b) comparison of Hacac displacement between TMA, DMAI, and TDMAA.

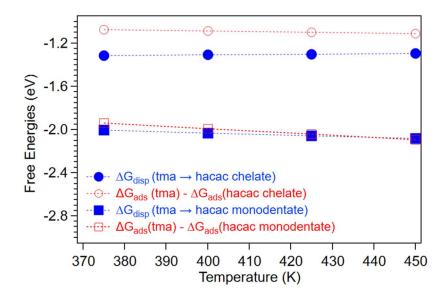


Figure 3. Displacement Gibbs free energies ( $\Delta$ Gdisp) for TMA displacing Hacac chelate (blue circles) and for TMA displacing Hacac monodentate (blue squares). Difference between adsorption energies ( $\Delta$ Gads) between TMA and Hacac chelate (red circles) and Hacac monodentate (red squares) at p = 10<sup>5</sup> Pa.