

Purification of Acetylenic Compounds via Formation of π -Complexation in Hydrocarbon Mixtures

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The conventional separation/purification processes using various adsorbents are restricted to van der Waals and electrostatic interactions between the adsorbent and adsorbate. In this study using metal ion-dispersed adsorbent, purification of acetylenic compounds existed as very low concentration in C_5 mixtures is accomplished by weak chemical bonds such as π -complexation. Prepared adsorbent for acetylenic compounds purification, Nickel-dispersed alumina adsorbent exhibited high adsorption capacity for acetylene as gas-phase. Furthermore, as shown the experimental results, it seems that the applications of Nickel-disperse adsorbent for acetylene compound such as 2-butyne in liquid-phase mixtures are possible.