

Selective Absorbents for Acetylenes Using Ionic Liquids

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The light olefins, such as ethylene, propylene, and isoprene play an essential role in various chemical synthesis and industrial processes. The removal of acetylenes, such as 2-butyne and isopropenyl acetylene (IPA), from cracked naphtha is the highest cost and energy consuming process in the petrochemical industry. The selective hydrogenation by precious metal catalysts was tried, but this also suffered from several drawbacks such as using expensive catalysts and poor selectivity. Recently, the development of effective absorbent of acetylenes using metals such as silver, nickel, and copper are reported but they still do not show good performance. Herein, we report the development of selective absorbents using ionic liquids containing metal ions and the investigation of absorption performance.