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Production of acetylene in a microwave discharge in liquid hydrocarbons with argon bubbling

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Acetylene is an important chemical intermediate that is widely used in the chemical industry. In recent years, there has been growing interest in the development of efficient methods for the synthesis of acetylene. This article discusses the use of a microwave discharge in liquid hydrocarbons with argon bubbling to produce acetylene. The maximum volumetric rate of acetylene formation during the experiments was 280 ml/min, with energy consumption for the formation of acetylene 48 l/kW·h. The dependences of the acetylene formation rate on the incident power and argon consumption are shown.

Keywords: microwave discharge, acetylene, discharge chromatography.

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