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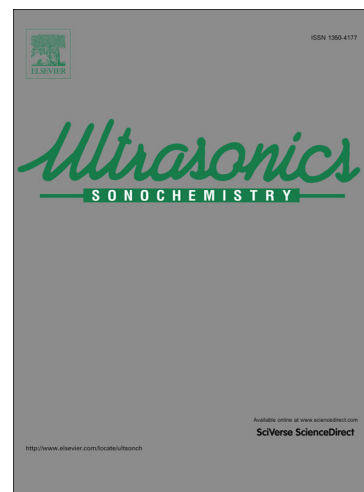
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Ultrasound-assisted impregnation for high temperature Fischer-Tropsch catalysts

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Abstract

A fraction of the petroleum extracted from oil reservoirs contains associated natural gas. Rather than building infrastructure to recover low volumes of this natural gas, the industry flares or vents it to the atmosphere, which contributes to atmospheric greenhouse gas emissions but also reduces the air quality locally because it contains gaseous sulphur and nitrogen compounds. Converting the natural gas (NG) to hydrocarbons with a small-scale two-step gas-to-liquids process, is an alternative to flaring and venting. In the first step, NG reacts with oxygen to form syngas (Catalytic Partial Oxidation) and in the second step the syngas reacts over metallic catalysts to form higher paraffins at 210 °C to 300 °C—Fischer Tropsch synthesis (FT). For the first time, we synthesize bimetallic FeCo FT catalysts with ultrasound. An ultra-

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