

Hydrotreating shale oil generated from the pyrolysis of Type-IIS kerogen

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Originating from a marine-depositional environment, Type-IIS kerogen is rich in sulfur-bearing organic compounds, and during thermal conversion produces oil with high sulfur content. Hydrotreating is necessary to remove the sulfur and nitrogen impurities. We report on results of hydrotreating tests in a continuous-flow microreactor on shale oil generated from the pyrolysis of a Type-IIS kerogen obtained from the Ghareb member of the Shfela Basin in Israel. The hydrotreating tests are conducted at different severities of temperatures and hydrogen partial pressures to evaluate the process parameters necessary to produce synthetic crude and ultralow sulfur distillate.