

Use of Nickel Oxide Catalysts (Bunsenites) for In-Situ Hydrothermal Upgrading Process of Heavy Oil

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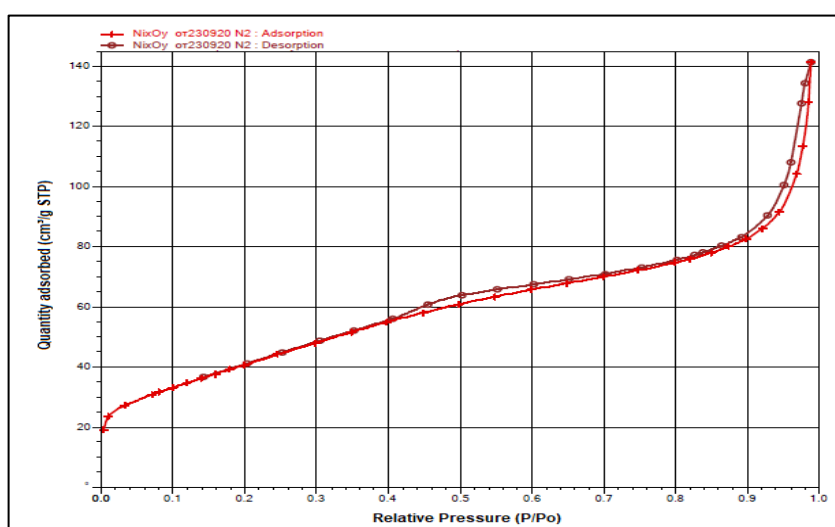


Figure S1. Isotherm linear plot of adsorption and desorption of catalyst-1.

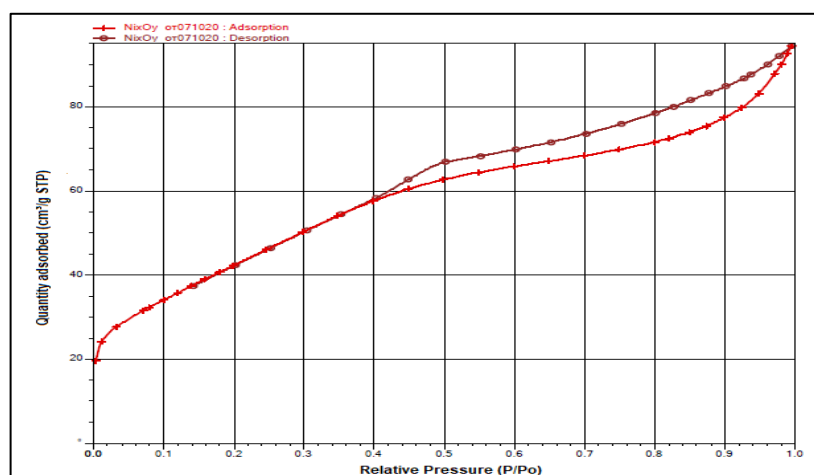


Figure S2. Isotherm linear plot of adsorption and desorption of catalyst-2.

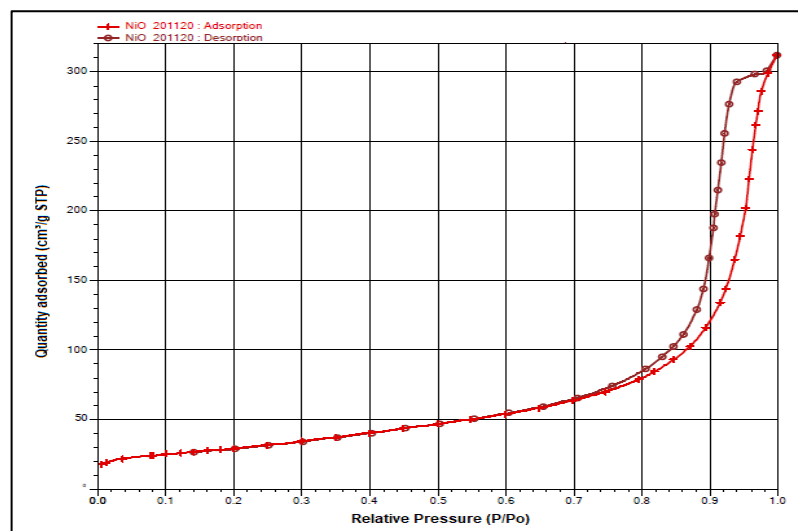


Figure S3. Isotherm of adsorption and desorption of catalyst-3.

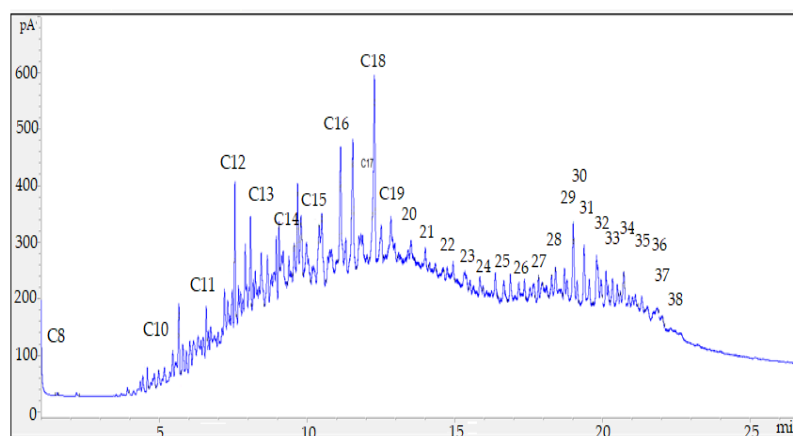


Figure S4. Chromatogram of saturate fractions of heavy crude oil.

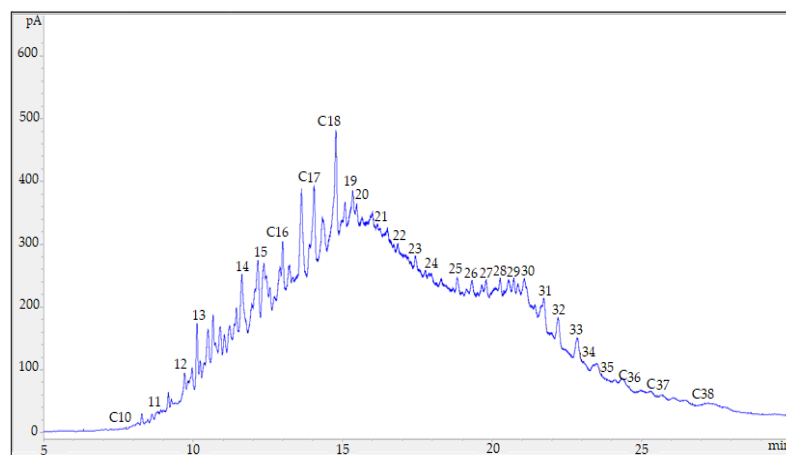


Figure S5. Chromatogram of saturate fractions of upgraded oil +steam.

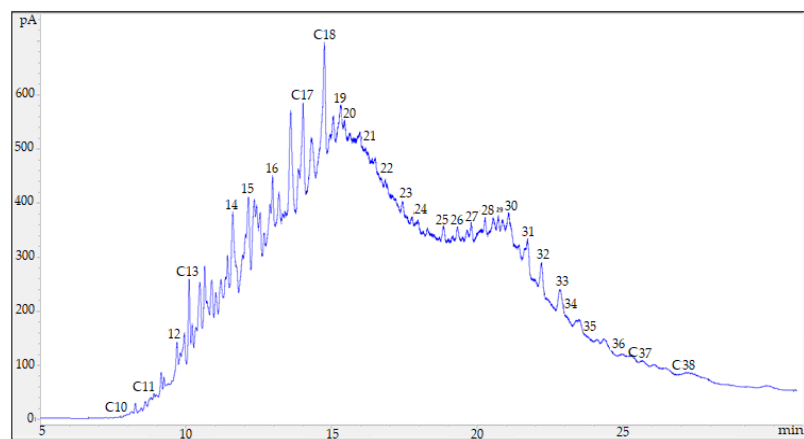


Figure S6. Chromatogram of saturate fractions of upgraded oil + catalyst-1.

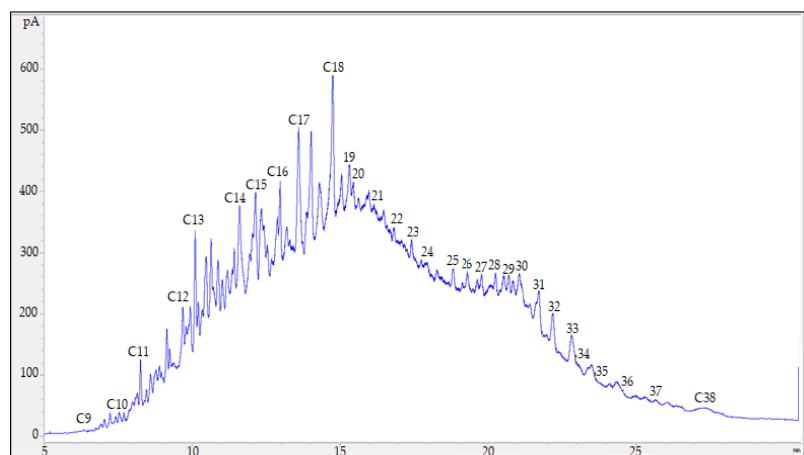


Figure S7. Chromatogram of saturate fractions of upgraded oil + catalyst-2.

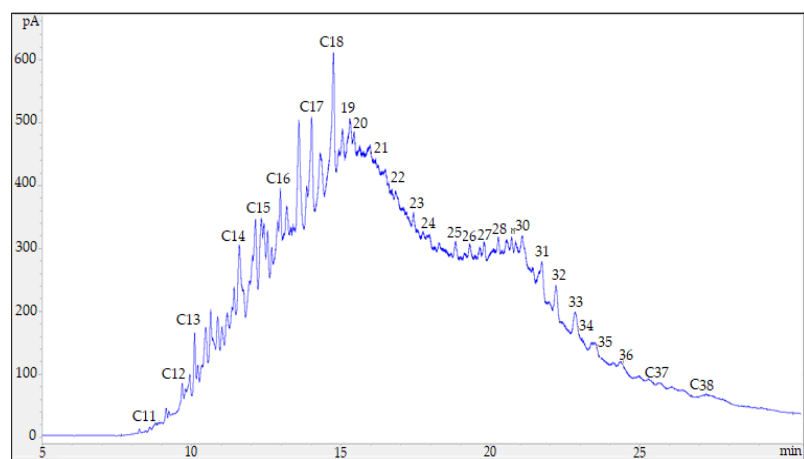


Figure S8. Chromatogram of saturate fractions of upgraded oil + catalyst-3.