

## Preparation and evaluation of bitumen hydrocracking catalyst using macroporous $\text{Al}_2\text{O}_3$ as catalyst support

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The aim of the present work was to make the catalyst for hydrocracking of bitumen from macroporous  $\text{Al}_2\text{O}_3$  and estimate performance of catalyst. Macroporous  $\text{Al}_2\text{O}_3$  was prepared using polystyrene spheres as template. The size of the macropores can be tailored by controlling the size of template. Co-Mo was loaded on macroporous  $\text{Al}_2\text{O}_3$  by impregnation. Hydrocracking of bitumen was carried out in a customer-made bath reactor at 400-410°C and at an initial hydrogen pressure of 70 atm. X-ray diffractometer and scanning electron microscopy were employed to study the structure and surface morphology of support. The reactant was analyzed by asphaltenes/maltenes separation device, API measuring device, Boiling point analysis device (ISMDIS) and SARA(saturate, aromatic, resin, asphaltene) content measuring device.