

**Development of high performance catalyst for heavy oil upgrading.** Redhwi, Halim H.; Al-Saleh, Muhammad A.; Ali, Syed A.; Ahmed, Shakeel. Center for Refining & Petrochemicals, The Research Institute, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. Proceedings of the World Petroleum Congress (2002), 17th(Vol. 3), 261-271. Publisher: Institute of Petroleum, CODEN: WPCPAU ISSN: 0084-2176. Journal; General Review written in English. CAN 145:379822 AN 2006:211443 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

### **Abstract**

A review. This paper presents an overview with refs. on research program being pursued at the Research Institute of King Fond University of Petroleum and Minerals is aimed at development of suitable catalysts for hydrocracking of the vacuum gas oils from Arabian Light crude to obtain higher quality distillate products. The newly developed high-performance hydroprocessing catalysts are based on amorphous silica alumina and modified zeolites. Active metals have been incorporated into these novel supports to prep. several catalyst formulations for both the stages of the conventional fixed-bed hydrocrackers. These novel catalysts have been characterized by sophisticated techniques and evaluated for their performance. Some of the formulations of developed catalysts have exhibited high performance in terms of hydrodesulfurization and cracking activities. These catalysts are being further developed, comprehensively characterized, and thoroughly evaluated in order to come up with a tailor-made catalyst formulation for hydrocracking of heavy fractions of Arabian Light crude oil.