

Development of heavy oil hydrocracking catalysts - catalyst characterization with temperature programmed-desorption, -reduction and -sulfiding. Iwamatsu, E.; Sanada, Y.; Yoneda, T.; Ahmed, H.; Ali, S.; Lee, A.; Hamid, H.. Advanced Catalysts Research Laboratory, Petroleum Energy Center, Kanagawa, Japan. Preprints - American Chemical Society, Division of Petroleum Chemistry (1997), 42(2), 326-330. Publisher: American Chemical Society, Division of Petroleum Chemistry, CODEN: ACPCAT ISSN: 0569-3799. Journal written in English. CAN 127:6873 AN 1997:278415 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Recently metal oxide pillared clay which is expected to be a post zeolite has raised great interest as a porous solid acid in catalyst development. A literature study of the property or activity of these metal oxide pillared clays has been done. Since acid property is one of the important functions in a hydrocracking catalyst, there is a possibility that metal oxide pillared clay, because of its acidity, is used as one of the components of hydrocracking catalyst. Since the reaction atm. is sulfiding under the process condition of heavy oil hydrocracking, it is important to est. the catalyst property under a sulfiding condition. Much research work has been done on detg. the catalyst property in hydrocracking under the condition of sulfiding, however, very little research work has dealt with measurement of the acid property after sulfiding. Therefore, in this study, the acid property of sulfided metal oxide pillared clay was measured by using TPD-S, TPR-S and cracking reaction of a model compd. (cumene) as basic research in the development of heavy oil hydrocracking catalysts.