

## **Barium modification of a high-silica zeolite for methanol conversion to light alkenes.**

Abdillahi, M. M.<sup>1</sup>; El-Nafaty, U. A.<sup>2</sup>; Al-Jarallah, A. M.<sup>2</sup>.

1. Research Institute, King Fahd Univ. Pet. Miner., Dhahran, Saudi Arabia.

2. Department of Chemical Engineering, College of Engineering Science, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia

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### **Abstract**

High-silica zeolite (silicalite) was modified with Ba resulting in reduced acid strength of the catalyst and better performance when compared with ZSM-5 and fresh silicalite in converting MeOH to alkenes. Various concns. of Ba were ion-exchanged and impregnated to achieve the optimum loading of the modifier. The fresh and the modified zeolites were fully characterized by x-ray diffraction, SEM, TGA, DTA, as well as by surface area, chem. and other analyses. Ba silicalite has a lowered coke deposition and an improved active life when ion exchanged. The reverse was obsd. in the case of impregnation.