An EPR Study of Mo⁵⁺ Introduced into NaY Zeolites by Solid-State Reactions

F. Ucun, A. Sağlam, F. Köksal^a, and S. Bahçeli

Department of Physics, Faculty of Arts and Sciences, Süleyman Demirel University, Isparta, Turkey Department of Physics, Faculty of Arts and Sciences, Ondokuz Mayıs University, Samsun, Turkey

Z. Naturforsch. 54a, 159-161 (1999); received December 2, 1998

By means of an EPR investigation of Mo^{5+} ions introduced into NaY zeolites by solid-state reactions, the location and coordination of Mo^{5+} in zeolites were investigated. Two different locations, free and distorted tetrahedral, were found. The molecular orbital coefficient, β^2 , and the effective charge, Q, for the Mo^{5+} ions in a distorted tetrahedral structure were calculated and interpreted.

Key words: EPR: Zeolite: Mo5+: NaY.

Reprint requests to Prof. Dr. F. Köksal. Fax: +90 3624576081