

International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM 2016 vol.1, pages 649-656

Thermal annealing derivatives of technogenic gypsum by electron paramagnetic resonance

Khasanova N., Khasanov R., Nizamutdinov N., Nurgaliev D.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© SGEM2016. Previously dehydration products EPR spectra of single crystals of gypsum ("Marino glass") have been studied in the temperature range from 100 to 425 °C [Crystall. Reports, 2014, Vol. 59, No. 3, pp. 399]. In this work, the subject of study was selected technogenic gypsum and its derivatives dehydration [Procedia Earth and Planet Sci. Vol. 15, 2015, P. 579]. Temperature region of formation gypsum, alpha and beta phase states of bassanite and gamma-anhydrite, insoluble anhydrite were determined from the EPR spectra of radical ions and the atomic hydrogen. Obtained results may be used for the control in the technological processes of gypsum materials production, and scientific purposes.

<http://dx.doi.org/10.5593/SGEM2016/B11/S01.082>

Keywords

Bassanite, Gamma-anhydrite, Gypsum, Insoluble anhydrite