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Thermal decomposition of tetraaminecuprosulfate monohydrate

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Abstract

By thermogravimetric analysis (TGA) we studied the thermal decomposition of tetraaminecuprosulfate monohydrate in linear rise in temperature and isothermal conditions in the atmosphere of the stationary atmosphere of the own vapor and in the stream of dry air. It has been established that degradation proceeds under isothermal conditions within 4 successive temperature stages.The effective kinetic parameters of the process in each stage have been defined. By IR spectroscopy solids were studied at each of the complex decomposition temperature stages.It was shown that the surface of these products has an increased adsorption capacity for water vapor in air.It has been established that for the kinetic description of the results of thermogravimetric analysis of the complex $[Cu(NH_3)_4]SO_4 \cdot H_2O$ in isothermal conditions topochemical models Kolmogorov-Erofeev, Garner-Prout-Tompkins, Roginskii-Schultz are applicable.