

## Study of supramolecular structure of metal coordinated polyurethanes

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### Abstract

Bulky coordination compounds of copper were designed, showing the catalytic activity in the low-temperature dissociation of urethane groups and the ability to interact with the isocyanate groups with the subsequent formation of azoaromatic derivatives. Formation of stack ordered structures due to the formation of the azo groups and their subsequent coordination binding was a condition of charge transport through the stacks, which led to the possibility of an abrupt fall of volume resistivity of polyurethanes ( $\rho_v$ ) by more than 10,000 times. It was found that the rigid blocks of coordination bound azo groups were formed in the polymer matrix having a significant influence on the supramolecular organization of polyurethanes, and on the complex of their physical and mechanical properties.