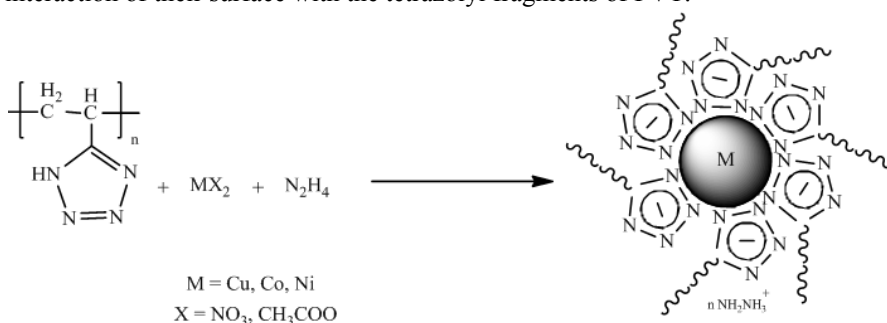


Synthesis of nanosized Cu, Co and Ni stabilized by poly-5-vinyltetrazole

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Within the framework of this research, we studied the possibility of using poly-5-vinyltetrazole (PVT) to obtain stable solutions of nanodispersed Cu, Co, and Ni. As a result, it was found that the reduction of the salts of the above metals ($\text{Cu}(\text{CH}_3\text{COO})_2$, $\text{Cd}(\text{NO}_3)_2$, $\text{Ni}(\text{NO}_3)_2$) in an aqueous solutions of hydrazine in the presence of PVT leads to the formation of aqueous solutions of nanodispersed Cu, Co and Ni. Confirmation of the participation of precisely PVT molecules in the stabilization processes of the obtained nanodispersed metals are the results of blank experiments carried out under similar conditions, but in the absence of PVT, and leading to the production of finely dispersed precipitates of these metals. Most likely, the stabilization of the obtained metal nanoparticles occurs due to the interaction of their surface with the tetrazolyl fragments of PVT.



According to the measurements, the diameter of the synthesized nanoparticles is predominantly laying in the range of 20 - 100 nm for Cu and of 10 - 40 nm for Co and Ni.

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