

## USE OF NEW TYPES OF NANOIRON FOR TOXIC METALS REMOVAL

### MOŽNOSTI VYUŽITÍ NOVÝCH TYPŮ NANOŽELEZA PRO ODSTRAŇOVÁNÍ TOXICKÝCH KOVŮ

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#### **Abstract:**

In the laboratories of the Research Centre: Advanced Remedial Technologies (Technical University of Liberec) have studied properties of nanoiron new types, supplied by Czech NANO IRON Ltd. from Rajhrad and the Centre for Nanomaterial Research of the Faculty of Science (Palacký University Olomouc). We focused on the ability of these materials to capture toxic metals (arsenic and chromium) from the model, waste and mine water. Tests were performed in standardized laboratory conditions and were evaluated on the basis of changes in physical parameters and concentrations of the monitored elements.

#### **Keywords:**

nanoiron, suspension of nanoparticles, arsenic, chromium, metal capture, shaking batch tests