Creation of novel hybrid sorbents for water treatment from heavy metal ions

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Using the template method there were synthesized mesoporous silica materials with significant parameters of the porous structure and high adsorption capacity. Depending on the tasks, it is possible to influence the formation of the functional layer by varying the nature of functional groups, their ratio and number. The materials with bi- and trifunctional active layers are especially interesting because they represent a wide field for the design of the structure and selectivity of mesoporous sorbents and their further application. The sorption selectivity and effectiveness obtained samples were studied on the mixture of cations of rare-earth and heavy metals.

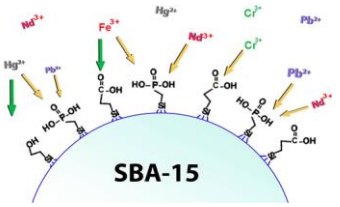

Figure 1. Scheme of structure

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