Full Paper

Registration Code of Publication: 13-33-1-104 Subsection: Inorganic Chemistry. Publication is available for discussion in the framework of the on-line Internet conference "Butlerov readings". http://butlerov.com/readings/ Contributed: February 2, 2013.

Platinum(IV) sorption by the modified carbon-mineral sorbent

© Tatiana A. Kovalenko,⁺ and Ludmila N. Adeeva*

Department of Inorganic Chemistry. Omsk State University. Mira St., 55A. Omsk, 644077. Russia. Phone: +7 (3812) 26-81-99. E-mail: kovalenko 85@list.ru

*Supervising author; ⁺Corresponding author

Keywords: sorption, platinum, modified sorbent, polyaniline, carbon-mineral sorbent, desorption.

Abstract

Results of research of selective extraction of platinum(IV) with the use of the synthesized modified carbon-mineral sorbent are given. The sorbent is modified by polyaniline in the form of the emeraldin-basis. Capacity of the obtained sorbent on platinum(IV) makes 62 mg/g, and is not lowered in the presence of the ions of copper(II), nickel(II), iron(III), being in concentrations of the order greater than the concentration of platinum. By IR-spectroscopy it is shown that platinum sorption on the modified sorbent proceeds by amino groups. As the eluent we can use the hydrochloric acid solution of thiourea.