

The adsorption selectivity regulation of the carbon nanomaterials surface

© Ludmila A. Ozerova,¹⁺ Alexandr I. Soldatov,^{2*} and Daria E. Pleshivceva³

South Ural State University. Lenin's prospectus, 76. Chelyabinsk, 454080. Russia.

¹⁾ Phone: +7 (951) 477-39-14. E-mail: simply_sky@mail.ru; ²⁾ Phone: +7 (351) 267-99-55.

E-mail: bgd-susu@yandex.ru; ³⁾ Phone: +7 (951) 804-32-98. E-mail: DashytkaPDE@yandex.ru

*Supervising author; +Corresponding author

Keywords: nanocomposite, functional groups, selectivity, adsorption, surface modification.

Abstract

Nanomaterials based on carbon are more and more used in various fields of technology due to unique properties and versatility of carbon. It is shown that by adjusting the appropriate type of chemical treatment of carbon materials, we can achieve the formation of defined carbon structure and achieve complete interaction between the components of the composite. Structural fragments of nanoparticles surface, which determine the selectivity of adsorption towards defined group of organic compounds were identified.