

Synthesis and investigation of polychromiumphenilsiloksanes, containing chromium atoms in oxidation state of +6

© Svetlana G. Krasitskaya,⁺ Alexander V. Alikovskiy,*

Alexander A. Morontsev, Mikhail I. Balanov, and Viktoria V. Vasileva

Department of General, Inorganic and Elementoorganic Chemistry. School of Natural Sciences.

Far Eastern Federal University. Sukhanov St., 8. Vladivostok, 690950. Russia.

Phone: +7 (423) 248-83-80. E-mail: krasitskayasg@gmail.com

*Supervising author; ⁺Corresponding author

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Abstract

The article shows the possibility of synthesis of polychromiumphenilsiloxanes containing chromium atoms in highest oxidation state by phenyltrichlorosilane interaction with potassium chromate. The ratio of silicon to chromium can be increased by changing the stoichiometric ratio of the starting reagents. To obtain a positive result it is needed to introduce potassium carbonate into the reaction system in the amount considerably greater than stoichiometric. The resulting polymers were explored by elemental analysis, IR spectroscopy, X-ray diffraction analysis. Interplanar distances of polychromiumphenilsiloxanes with high chromium content are higher as compared to poliphenilsiloksanes.