

Purification, modification and application of carbon nanotubes in low-temperature oxidation of cumene

© Alexey S. Orlov,¹ Natalia S. Kobotaeva,¹ Oleg Kh. Poleshchuk,²
Tatiana S. Skorohodova,¹ Dmitry A. Afanasyev,² and Alexey G. Zherlitsyn³

¹ Federal State Institution of Science, Institute of Petroleum Chemistry,
Siberian Branch of the Russian Academy of Sciences. Akademicheskii Pr., 4. Tomsk, 634021. Russia.

Phone: +7 (9234) 20-71-39. E-mail: orlov_alex1984@mail.ru

² National Research Tomsk Polytechnical University. Lenin Pr., 30. Tomsk, 634050. Russia.

³ Physico-Technical Institute of the National Research Tomsk Polytechnic University.

Lenin Pr., 2a. Tomsk, 634000. Russia

*Supervising author; [†]Corresponding author

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Abstract

The paper describes two different methods of purification of carbon nanotubes from amorphous carbon. Purification samples were characterized by XRD, IR spectroscopy, TGA, ESR, and tested their catalytic activity in the oxidation of cumene to cumene hydroperoxide at the temperature of 60 °C. During the reaction, the conversion was achieved equal to 8.9% and the selectivity on cumene hydroperoxide by 90.3%.