

Synthesis of a monomer – isoprene for synthetic rubbers from 1,3-dioxolane and *tret*-butyl alcohol in the presence of solid acid catalysts

© **Dmitriy I. Vavilov,⁺ Rodion R. Zinurov, Raisa A. Ahmedyanova,*
Alexander G. Liakumovich,* and Yakov A. Levin**

Faculty of synthetic rubber technology. Kazan state technological university. K. Marx St., 68. Kazan, 420015. Republic Tatarstan. Russia. Phone: +7 (843) 231-43-91. E-mail:vavilovdi@yandex.ru

*Supervising author; ⁺Corresponding author

Keywords: *isoprene, tret-butyl alcohol, 1,3-dioxolane, cation-exchange resin.*

Abstract

Possibility of one-phase synthesis of isoprene is shown from 1,3-dioxolane and *tret*-butyl alcohol in the presence of acid heterogeneous catalysts – cation-exchange resins of various marks. Optimum conditions for carrying out the process are chosen, under which the conversion of 1,3-dioxolane – 99.4%, selectivity of process on isoprene – 93.5% and the yield of isoprene on converting 1,3-dioxolane – 92.9% was performed.