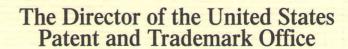
The United States of America



Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Michelle K. Lee

Deputy Director of the United States Patent and Trademark Office



(12) United States Patent

Ordomskiy et al.

(54) ONE-STEP METHOD FOR BUTADIENE PRODUCTION

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Subject to any disclaimer, the term of this Notice: (*) patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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Field of Classification Search (58)CPC C07C 1/2072-1/2076; C07C 11/16; C07C 1/207 585/607, 609 See application file for complete search history.

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ABSTRACT (57)

This invention relates to gas-phase synthesis of butadiene from ethanol or ethanol and acetaldehyde mixture. The method of synthesis includes ethanol or ethanol and acetaldehyde mixture conversion in the presence of a catalyst, which differs from the known methods by the carrying out of the interaction in the presence of the solid catalyst, which contains metal, chosen from the group of silver, gold or copper, and metal oxide, chosen from the group of magnesium, titanium, zirconium, tantalum or niobium oxides. The method announced is used for condensation process under the conditions of continuous flow fixed bed reactor. The invention allows to reach high yield and selectivity to butadiene and high level of conversion of the feed.

16 Claims, No Drawings