

This article was downloaded by:

On: 30 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713618290>

THE INVESTIGATION OF DIBENZTHIOPHENE AND DIBENZTHIOPHENDIOXIDE DERIVATIVES SYNTHESIS METHODS

V. A. Ustinov^a; G. S. Mironov^a; E. R. Kofanov^a

^a Polytechnical Institute, Yaroslavl, USSR

To cite this Article Ustinov, V. A. , Mironov, G. S. and Kofanov, E. R.(1979) 'THE INVESTIGATION OF DIBENZTHIOPHENE AND DIBENZTHIOPHENDIOXIDE DERIVATIVES SYNTHESIS METHODS', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 6: 1, 313

To link to this Article: DOI: 10.1080/03086647908080430

URL: <http://dx.doi.org/10.1080/03086647908080430>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

THE INVESTIGATION OF DIBENZTHIOPHENE AND DIBENZTHIOPHENDIOXIDE DERIVATIVES SYNTHESIS METHODS

V.A. Ustinov, G.S. Mironov, E.R. Kofanov

Polytechnical Institute, Moscow Avenue, 88, Yaroslavl, USSR

The polymeric materials containing thiophene units possess a number of important properties including the increased thermal stability. Thus we have developed the methods of synthesizing the diamino-, dioxy-, and tetraamino-derivatives of dibenzthiophene (DBT) and dibenzthiophendioxide (DBTD), which find their application as monomers for polymeric materials. The synthesis of these monomers was carried out with halogen-substituted DBT DBTD on Cu catalysts by ammonolysis and hydrolysis reactions and also by consecutive nitration, ammonolysis and catalytic reduction reactions.

The nucleophilic substitution of aromatically combined halogen for substituted phenolates in DBT and DBTD derivatives was investigated. The effect of nucleophilic agent basicity on nucleophilic substitution reaction was revealed. This made it possible to develop the methods of synthesis of polynuclear bisphenols, diamines, di- and tetracarboxylic acids and their derivatives, di- and tetranitriles. In the course of synthesis of monomers basing on DBT and DBTD the considerable attention was paid to the determination of isomeric composition of compounds produced, and to the methods of final product recovery and purification.