Anodische Oxidation von 2-Thiobarbitursäuren unter Bildung neuartiger, tetracyclischer Dimerer

Anodic Oxidation of 2-Thiobarbituric Acids under Formation of New Tetracyclic Dimers

Hans Günter Thomas, Michael Rasp, und Gerhard Raabe

Institut für Organische Chemie der Rheinisch-Westfälischen Technischen Hochschule Aachen, Professor-Pirlet-Straße 1, D-52074 Aachen

Sonderdruckanforderungen an Prof. Dr. H. G. Thomas.
E-mail: HG.Thomas@oc.rwth-aachen.de

Z. Naturforsch. **57b,** 215–225 (2002); eingegangen am 5. September 2001

Anodic Oxidation, Radicals, Dimerization

2-Thiobarbituric acids **1** can be dimerized anodically in acceptable yields if the special ultrasonic electrolysis cell described here is used. In some cases two isomeric dimers **2** and **4** were isolated. **2** is of the same type as the corresponding barbituric acid dimers. The other dimer **4** has a completely different, tetracyclic structure characterized by NMR spectra and X-ray diffraction. The mechanism postulated for the formation of the tetracyclic dimers is supported by cyclovoltammetric measurements.