Thematic Section: Preparative Research. Full Paper

Subsection: Organoelemental Chemistry.

Registration Code of Publication: 14-38-5-161

Publication is available for discussion within the functioning of the permanent internet-Conference "New methods of synthesis, structure and application of organoelemental compounds" http://butlerov.com/synthesys/

Contributed: August 27, 2014.

## Synthesis and structure of bis(4-nitrophenylacetate) tri-m-tolylbismuth

## © Vladimir V. Sharutin,\*+ and Olga K. Sharutina

Faculty of Chemistry. National Research South Ural State University. Lenina St., 76. Chelyabinsk, 454080. Russia. Phone: +7 (351) 267-95-70. E-mail: vvsharutin@rambler.ru

\*Supervising author; \*Corresponding author

*Keywords:* tri-*m*-tolylbismuth, 4-nitrophenylacetic acid, *tert*-butylhydroperoxide, oxidative addition, *bis*(4-nitrophenylacetate) tri-*m*-tolylbismuth, structure.

## **Abstract**

Reaction of tri-m-tolylbismuth with 4-nitrophenylacetic acid in the presence of tert-butylhydroperoxide in ether gives bis(4-nitrophenylacetate) tri-m-tolylbismuth (I). According to the X-ray data, bismuth atom in the molecule I has a distorted trigonal-bipyramidal coordination (OBiO axial angle and CBiC equatorial angles are  $169.53(18)^{\circ}$  and 109.3(6), 110.3(6),  $140.3(2)^{\circ}$ ). The Bi–O and Bi–C bond lengths are 2.228(12), 2.256(13) Å and 2.199(12), 2.223(12), 2.279 (8) Å, respectively. In molecule I present close intramolecular contacts  $Bi\cdots O = C$  (2.908(8), 2.947(9) Å) on part of the largest equatorial angle CBiC.