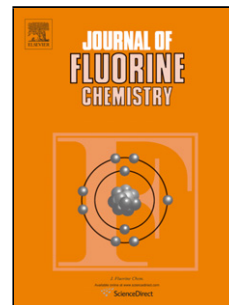


## Accepted Manuscript

Title: Highly efficient synthesis of polyfluorinated 2-mercaptobenzothiazole derivatives

Authors: Larisa Politanskaya, Zequn Duan, Irina Bagryanskaya, Ilia Eltsov, Evgeny Tretyakov, Chanjuan Xi



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## Highly efficient synthesis of polyfluorinated 2-mercaptobenzothiazole derivatives

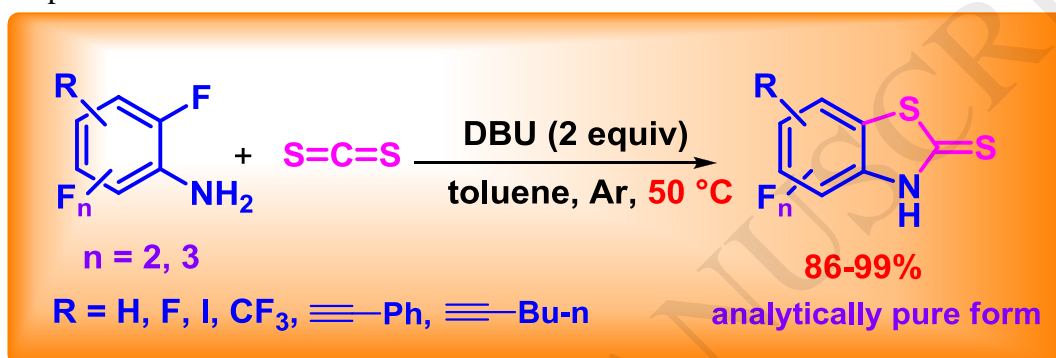
Larisa Politanskaya<sup>a,b\*</sup>, Zequn Duan<sup>b</sup>, Irina Bagryanskaya<sup>a,b</sup>, Ilia Eltsov<sup>b</sup>, Evgeny Tretyakov<sup>a,b</sup>, Chanjuan Xi<sup>c\*</sup>

<sup>a</sup> N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry, Siberian Branch of Russian Academy of Sciences, Ac. Lavrentiev Ave., 9, Novosibirsk 630090, Russian Federation

<sup>b</sup> Novosibirsk State University, Pirogova Street, 2, Novosibirsk 630090, Russian Federation

<sup>c</sup> Key Laboratory of Bioorganic Phosphorus Chemistry & Chemical Biology (Ministry of Education), Department of Chemistry, Tsinghua University, Beijing 100084, China

Graphical abstract



### Highlights

- Directed synthesis of polyfluorinated 2-mercaptobenzothiazole derivatives
- DBU-promoted tandem reaction
- Selective substitution of *ortho*-fluorine atom
- Highly efficient synthetic procedure

**Abstract:** A convenient and efficient method for the synthesis of polyfluorinated 2-mercaptobenzothiazoles from the corresponding aniline derivatives and CS<sub>2</sub>, mediated by 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU) in toluene is described. The reaction proceeded *via* nucleophilic attack at the carbon atom of carbon disulfide by the nitrogen atom of NH<sub>2</sub>-group in arene followed by selective intramolecular fluorine atom substitution in the *ortho*-position to the amino group. This synthetic methodology could be used to prepare fluorinated 2-mercaptobenzothiazole containing alkynyl group in good to excellent yields. The reaction takes place under very mild reaction conditions (50 °C) and uses readily available starting materials.

**Keywords:** Polyfluorinated anilines, Polyfluorinated heterocycles, Tandem reaction, Reaction mechanism, 2-Mercaptobenzothiazoles

\* Corresponding author. e-mail: [plv@nioch.nsc.ru](mailto:plv@nioch.nsc.ru) (Larisa Politanskaya)

\* Corresponding author. e-mail: [cjxi@tsinghua.edu.cn](mailto:cjxi@tsinghua.edu.cn) (Chanjuan Xi)

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