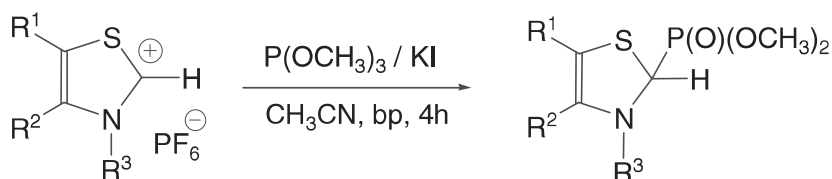


## SIMPLE METHOD FOR THE PREPARATION OF DIALKYL (2,3-DIHYDRO-1,3-THIAZOL-2-YL)-PHOSPHONATES

**Karolina Janikowska and Sławomir Makowiec**

*Department of Organic Chemistry, Faculty of Chemistry, Gdansk University of Technology, Gdańsk, Poland*

### GRAPHICAL ABSTRACT



**Abstract** A simple synthesis of dialkyl (2,3-dihydro-1,3-thiazol-2-yl)-phosphonates from thiazolium salts and trialkyl phosphites is described. The series of dialkyl (2,3-dihydro-1,3-thiazol-2-yl)-phosphonates with various substituents in positions 3, 4, and 5 of the thiazole ring were prepared. However, only phosphonates with an aryl on the nitrogen atom were stable enough for chromatographic purification, although all the new phosphonates are very sensitive to oxidation. We made efforts to apply dialkyl (2,3-dihydro-1,3-thiazol-2-yl)-phosphonates in a Horner–Wadsworth–Emmons reaction, but the generated antiaromatic anion of phosphonate decomposed quickly, even at  $-70^{\circ}\text{C}$ .

**Keywords** Dithiadiazafulvalenes; organic metals; phosphonates

## INTRODUCTION

The tetraheterofulvalenes belong to a class compounds that are in the circle of interest of many laboratories, from physics to organic chemistry. Their popularity is due to the great variety of applications of these compounds.

Most of the applications of tetraheterofulvalenes are as a result of their high electron-donating properties; this group of compounds is usually an integral part of synthetic metals,<sup>1</sup> semiconductors, and other advanced materials.<sup>2</sup> The majority of applied tetraheterofulvalenes contain four sulfur atoms or sulfur and selenium atoms due to their availability, relative oxidation stability, and easy modification in side chain, and also due to the possibility of preparing unsymmetrical tetrathiafulvalenes (TTF).<sup>3</sup>

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Address correspondence to Dr. Sławomir Makowiec, Department of Organic Chemistry, Faculty of Chemistry, Gdansk University of Technology, Narutowicza 11/12, Gdańsk 80-952, Poland. E-mail: mak@chem.pg.gda.pl