

Accepted Manuscript

Sonochemistry: an efficient alternative to the synthesis of 3-selanylindoles using CuI as catalyst

Beatriz M. Vieira, Samuel Thurow, Juliana S. Brito, Gelson Perin, Diego Alves, Raquel G. Jacob, Claudio Santi, Eder J. Lenardão

PII: S1350-4177(15)00141-8

DOI: <http://dx.doi.org/10.1016/j.ultsonch.2015.05.012>

Reference: ULTSON 2871

To appear in: *Ultrasonics Sonochemistry*

Received Date: 2 March 2015

Revised Date: 29 April 2015

Accepted Date: 13 May 2015



Please cite this article as: B.M. Vieira, S. Thurow, J.S. Brito, G. Perin, D. Alves, R.G. Jacob, C. Santi, E.J. Lenardão, Sonochemistry: an efficient alternative to the synthesis of 3-selanylindoles using CuI as catalyst, *Ultrasonics Sonochemistry* (2015), doi: <http://dx.doi.org/10.1016/j.ultsonch.2015.05.012>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Sonochemistry: an efficient alternative to the synthesis of 3-selanylindoles using CuI as catalyst.

Beatriz M. Vieira^a, Samuel Thurow^a, Juliana S. Brito^a, Gelson Perin^a, Diego Alves^a, Raquel G. Jacob^a, Claudio Santi^b, Eder J. Lenardão^{a,*}

^a *Laboratório de Síntese Orgânica Limpa - LASOL - Universidade Federal de Pelotas - UFPel - P.O. Box 354, 96010-900, Pelotas – RS, Brazil.*

^b *Dipartimento di Chimica e Tecnologia del Farmaco, Group of Catalysis and Green Chemistry, Università degli Studi di Perugia, Perugia, Italy.*

* corresponding author. Tel: +55 (53) 3275-7533.

E-mail addresses: biamvieira14@hotmail.com (B.M. Vieira), samuelthurowdoug@gmail.com (S. Thurow), julianabrito@gmail.com (J.S. Brito), gelson_perin@ufpel.edu.br (G. Perin), diego.alves@ufpel.edu.br (D. Alves), raquel.jacob@ufpel.edu.br (R.G. Jacob), claudio.santi@unipg.it (C. Santi), lenardao@ufpel.edu.br (E.J. Lenardão).

Abstract: Ultrasonic (US) irradiation was successfully used as an alternative energy source to prepare 3-selanylindoles through the direct selanylation of indoles with diorganoyl diselenides using CuI (20 mol%) as catalyst and DMSO as the solvent. By using this US-promoted reaction, eleven 3-organylselanylindoles were prepared selectively and in good yields. A comparative study between the reactions under conventional heating, microwave and ultrasound irradiations was performed, and it was observed advantage in using US over the other heating systems.

Keywords: sonochemistry; 3-arylselanylindoles; organoselenium; copper-catalysis; green chemistry.

Download English Version:

<https://daneshyari.com/en/article/7703788>

Download Persian Version:

<https://daneshyari.com/article/7703788>

[Daneshyari.com](https://daneshyari.com)