Srpsko hemijsko društvo

Serbian Chemical Society

57. savetovanje Srpskog hemijskog društva

KRATKI IZVODI RADOVA

KNJIGA RADOVA

57th Meeting of the Serbian Chemical Society

Book of Abstracts Proceedings

Kragujevac 18. i 19. juni 2021.
Kragujevac, Serbia, June 18-19, 2021

ISBN-978-86-7132-077-1

57. SAVETOVANJE SRPSKOG HEMIJSKOG DRUŠTVA
Kragujevac, 18. i 19. juni 2021.
KRATKI IZVODI RADOVA/KNJIGA RADOVA
57th MEETING OF THE SERBIAN CHEMICAL SOCIETY
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BOOK OF ASTRACTS/PROCEEDINGS

***Izdaje** / Published by*
***Srpsko hemijsko društvo** / Serbian Chemical Society*
Karnegijeva 4/III, 11000 Beograd, Srbija
tel./fax: +381 11 3370 467; www.shd.org.rs, E-mail: Office@shd.org.rs

***Za izdavača**/For Publisher*
Dušan Sladić, *predsednik Društva*

***Urednici**/Editors*, ***Dizajn korica, slog i kompjuterska obrada teksta**/Cover Design, Page Making and Computer Layout*
prof. dr Snežana RAJKOVIĆ
Slađana ĐORĐEVIĆ
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***OnLine publikacija**/OnLine publication*

ISBN-978-86-7132-077-1

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Savetovanje podržalo/*Supported by*

Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije
Ministry of Education, Science and Technological Development of Republic of Serbia

NH-P-5

Sinteza i karakterizacija jedinjenja trifenilkalaja(IV) sa 3-(4-metil-2-oksohinolinil)propanskom kiselinom

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U poslednjoj deceniji jedinjenja organokalaja(IV) privukla su veliku pažnju istraživača zbog svoje izvanredne citotoksične aktivnosti protiv raznih oblika tumora. Ovde je prikazana sinteza 3-(4-metil-2-oksohinolinil)propanske kiseline i njenog kompleksa trifenilkalaja(IV). Ligand je dobijen u dva koraka. U prvom koraku, u reakciji između 4-metil-hinolin-2-ona i metil-3-bromopropionata sintetisan je odgovarajući metil-estar, čijom hidrolizom, u drugom koraku, je dobijen ligand. U reakciji liganda, koji je deprotonovan LiOH, i ekvimolarne količine Ph_3SnCl dobijen je kompleks u obliku belog taloga. Sintetisana jedinjenja su okarakterisana standardnim analitičkim metodama. Naredna istraživanja sintetisanih jedinjenja biće usmerena ka *in vitro* ispitivanju citotoksične aktivnosti prema raznim ćelijskim linijama karcinoma, kao i na ispitivanje mehanizma njihovog delovanja.

Synthesis and characterization of novel triphenyltin(IV) compound with 3-(4-methyl-2-oxoquinolinyl)propanoic acid

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Organotin(IV) compounds have greatly attracted researchers' attention in the last decade for their outstanding cytotoxic activity against different tumor cells. Herein, the synthesis of 3-(4-methyl-2-oxoquinolinyl)propanoic acid and its triphenyltin(IV) complex has been performed. The ligand precursor has been synthesized in two steps. In the first step, reaction between 4-methylquinoline-2-on and methyl 3-bromopropionate afforded corresponding methyl ester, whose hydrolysis, in the second step, produced targeted ligand. In the reaction of ligand precursor, which was deprotonated with LiOH, with equimolar amount of Ph_3SnCl, the expected complex was obtained as white solid. The synthesized compounds have been characterized using standard analytical methods. The following research of synthesized compounds will be focused on *in vitro* cytotoxic activity against various cancer cell lines, as well as investigation of mechanism of their action.

This investigation was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia [Agreement No. 451-03-9/2021-14/200122, 451-03-9/2021-14/200135, 451-03-9/2021-14/200178 and 451-03-9/2021-14/200116]