

Poster Presentations

Synthesis, DFT and thermal analysis of (Z)-1-((5-bromothiophen-2-yl)methylene)-2-(2,4-dinitrophenyl)hydrazine Schiff base

Hussam Yahya¹, Mohammed A. Al-Nuri¹, Shehdeh Jodeh¹, Rami Shariah²,
Ismail Warad¹

¹Department of Chemistry, Science College, An-Najah National University, P.O. Box 7, Nablus, Palestine

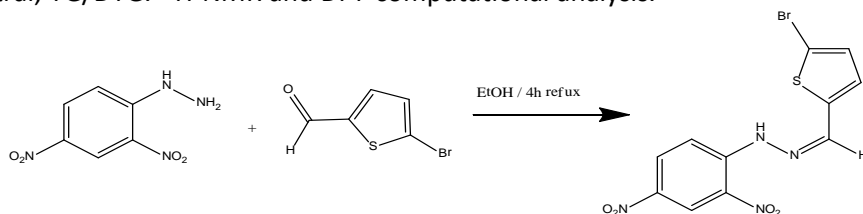
²Department of Basic Science, Faculty of Engineering, Applied Science Private University, PO Box 166, Amman 11931, Jordan

hussam.8593@hotmail.com

Abstract

New Schiff base (Z)-1-((5-bromothiophen-2-yl)methylene)-2-(2,4-dinitrophenyl)hydrazine was made available through condensing of (2,4-dinitrophenyl)hydrazine with 5-bromothiophene-2-carbaldehyde in good yield and fast technique, as seen in Scheme 1. Based on the theoretical calculation and experimental physical measurements Z- isomer is favored over E- isomer due to the intera H-bond between N-H...S, to form more stable six-membered ring.

The desired product formation was monitored by FT-IR and UV-visible, the structure was suggested based on: elemental analysis, EI-MS, UV-visible, FT-IR spectral, TG/DTG. ¹H-NMR and DFT-computational analysis.



Scheme 1. Synthesis of the (Z)-1-((5-bromothiophen-2-yl)methylene)-2-(2,4-dinitrophenyl)hydrazine.

References

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[2] Ghozlan S.; Al-Omar M.; Amr A.; Ali K.; El-Wahab A., J. Heterocycl. Chem. 48, 1103-1110 (2011)