

Supplementary Material

Metal-free addition of aliphatic carboxylic acids to cyanopropargyl alcohols: an access to new families of functionalized dihydrofurans and 3(2H)-furanones

Olesya A. Shemyakina,^a Ol'ga G. Volostnykh,^a Anton V. Stepanov,^a Igor' A. Ushakov,^a Anastasiya G. Mal'kina,^a Konstantin A. Apartsin,^{b,c} Viktoria V. Kireeva,^c and Boris A. Trofimov*^a

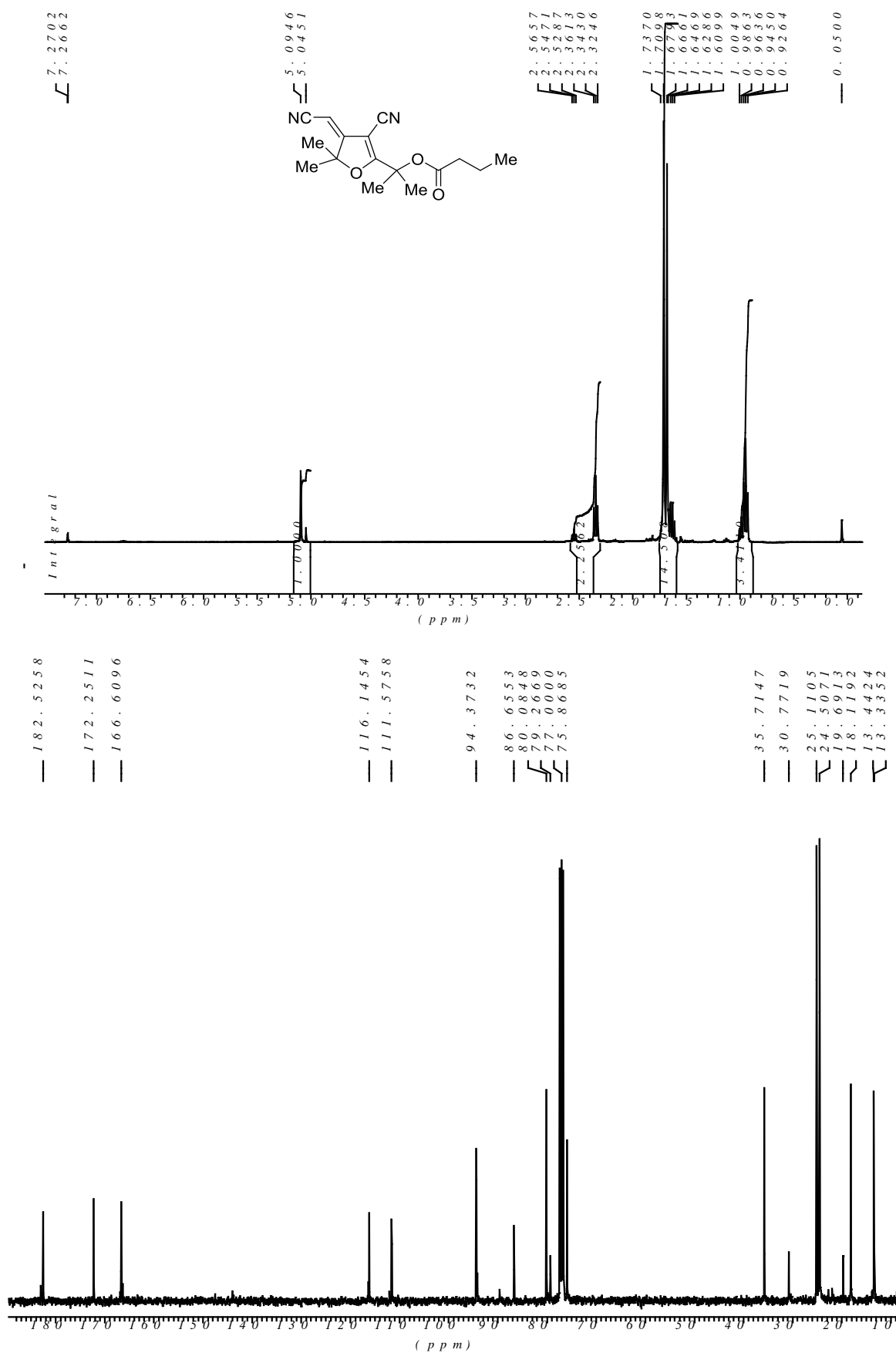
^aA. E. Favorsky Irkutsk Institute of Chemistry, Siberian Branch, Russian Academy of Sciences, 1 Favorsky Str., 664033, Irkutsk, Russian Federation. Fax: (395-2)41-93-46

^bThe Irkutsk Scientific Center of Surgery and Traumatology, 664003 Irkutsk, Russian Federation

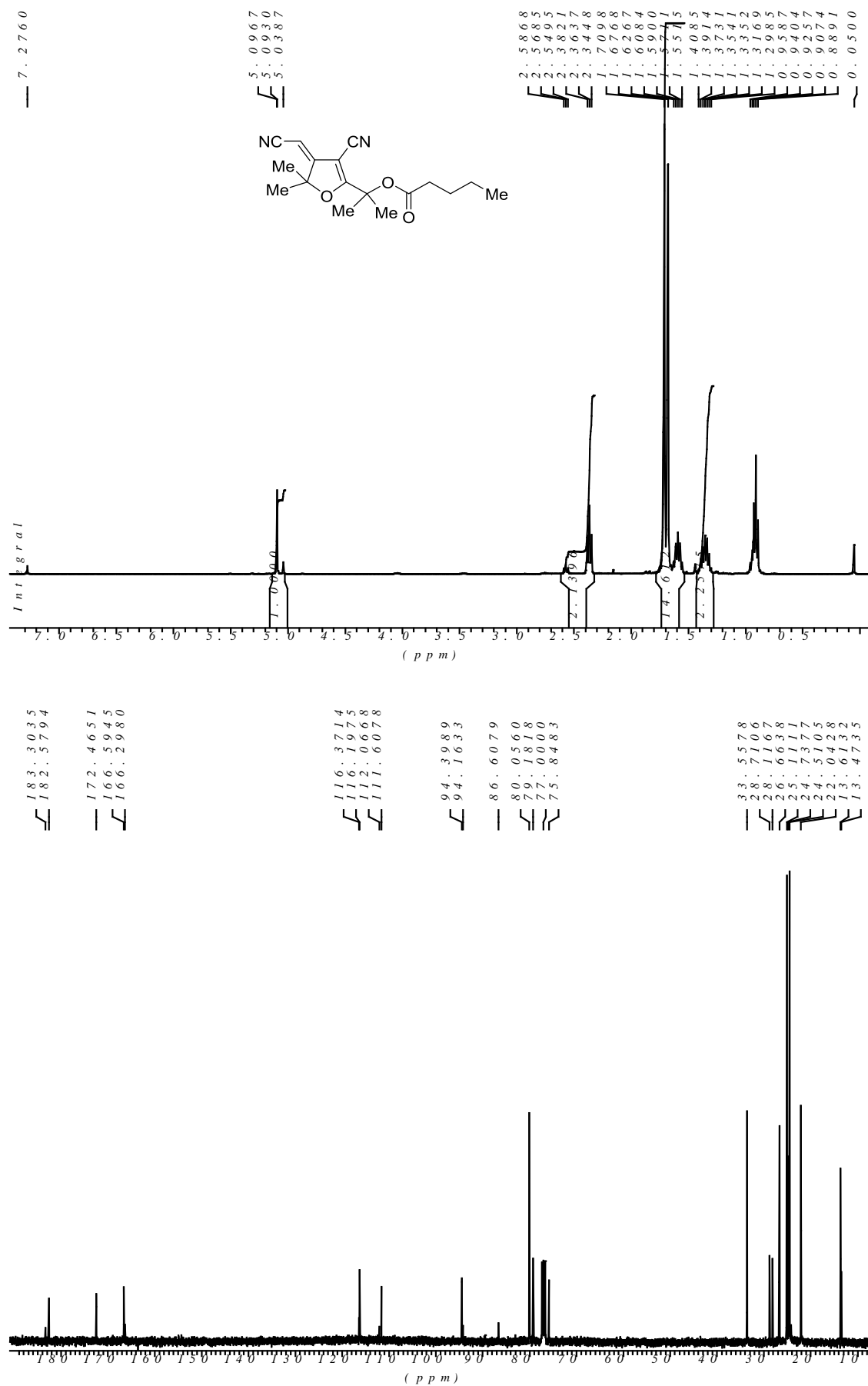
^cBiomedical Research and Technology Department of the Irkutsk Scientific Center, Siberian Branch, Russian Academy of Sciences, 664003 Irkutsk, Russian Federation

Email: boris_trofimov@irioch.irk.ru

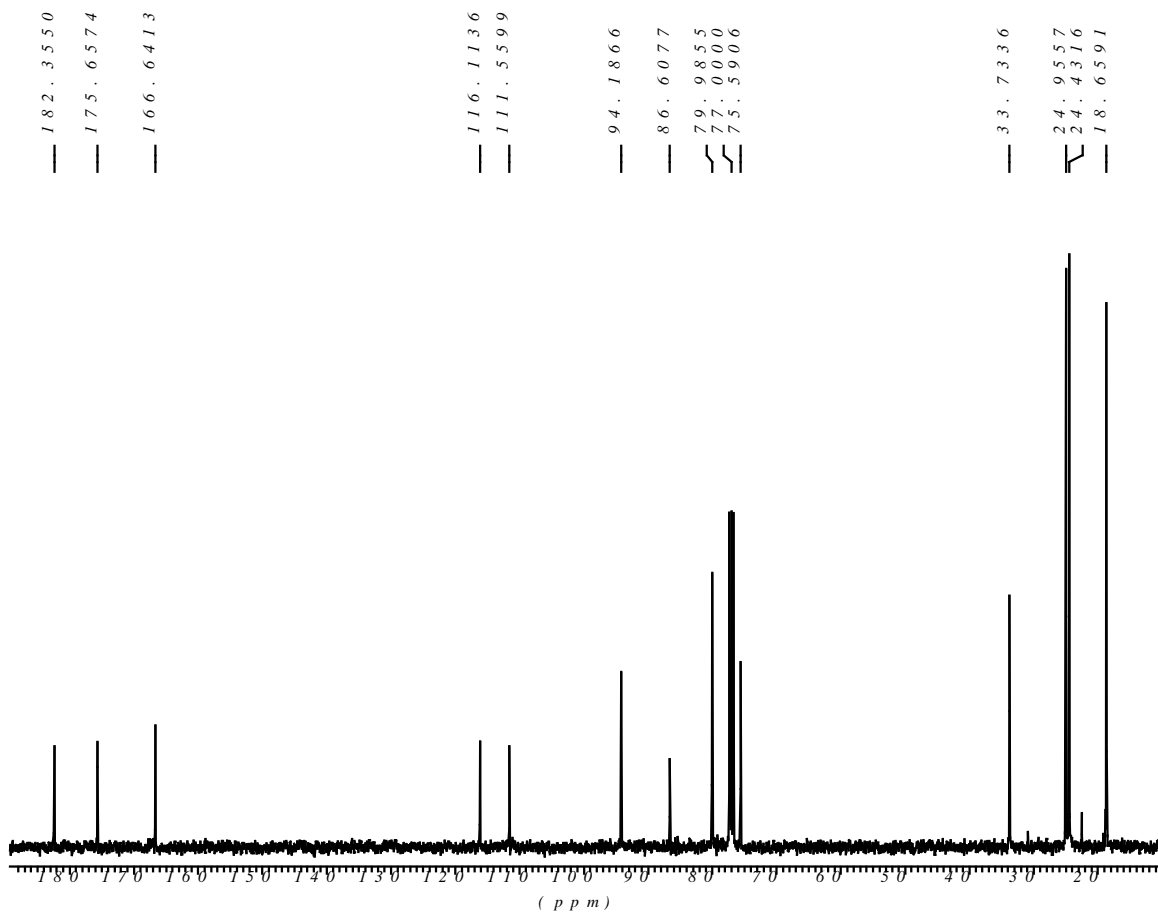
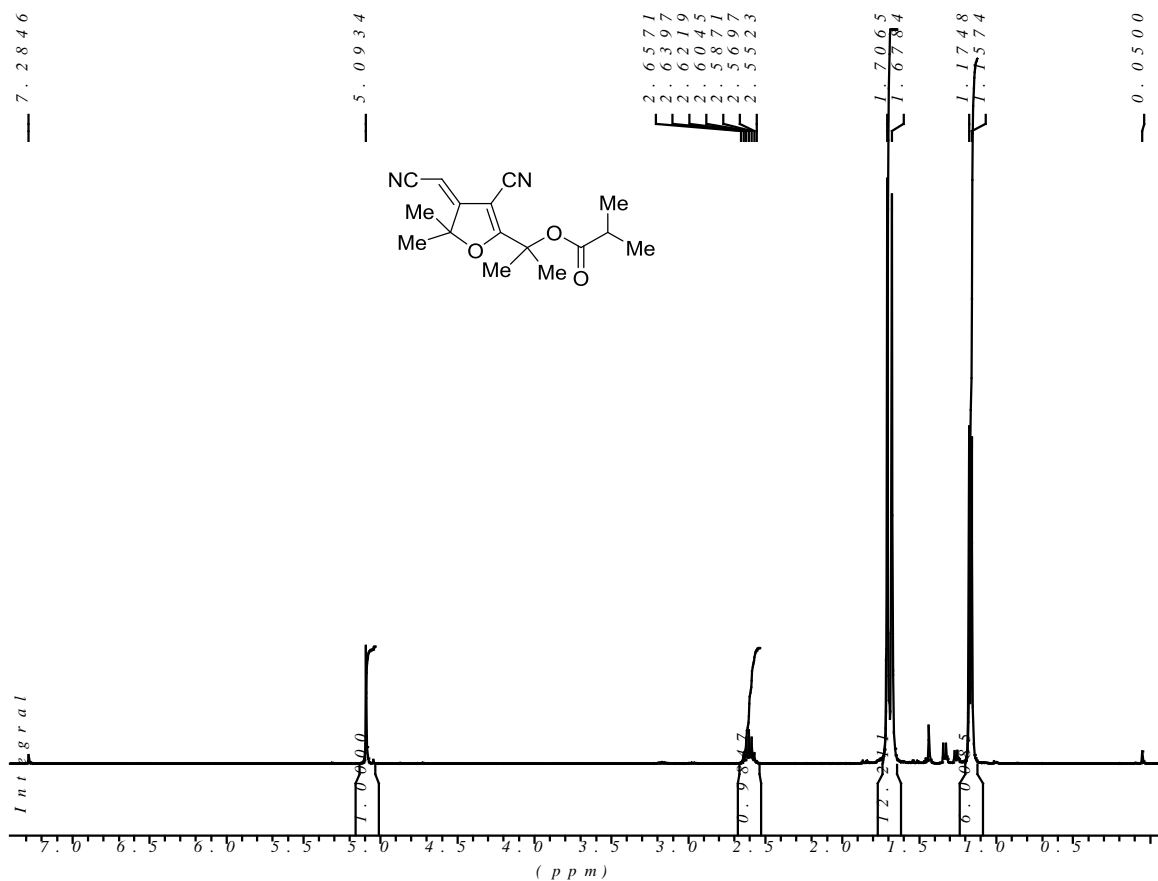
1. ¹H and ¹³C spectra of the synthesized products **3b-e** S2
2. ¹H and ¹³C spectra of the synthesized products **4b-e** S6

1. ^1H and ^{13}C spectra of the synthesized products 3b-e**(Z)-2-[3-Cyano-4-(cyanomethylene)-5,5-dimethyl-4,5-dihydrofuran-2-yl]propan-2-yl butyrate (3b)**

(Z)-2-[3-Cyano-4-(cyanomethylene)-5,5-dimethyl-4,5-dihydrofuran-2-yl]propan-2-yl pentanoate (3c)

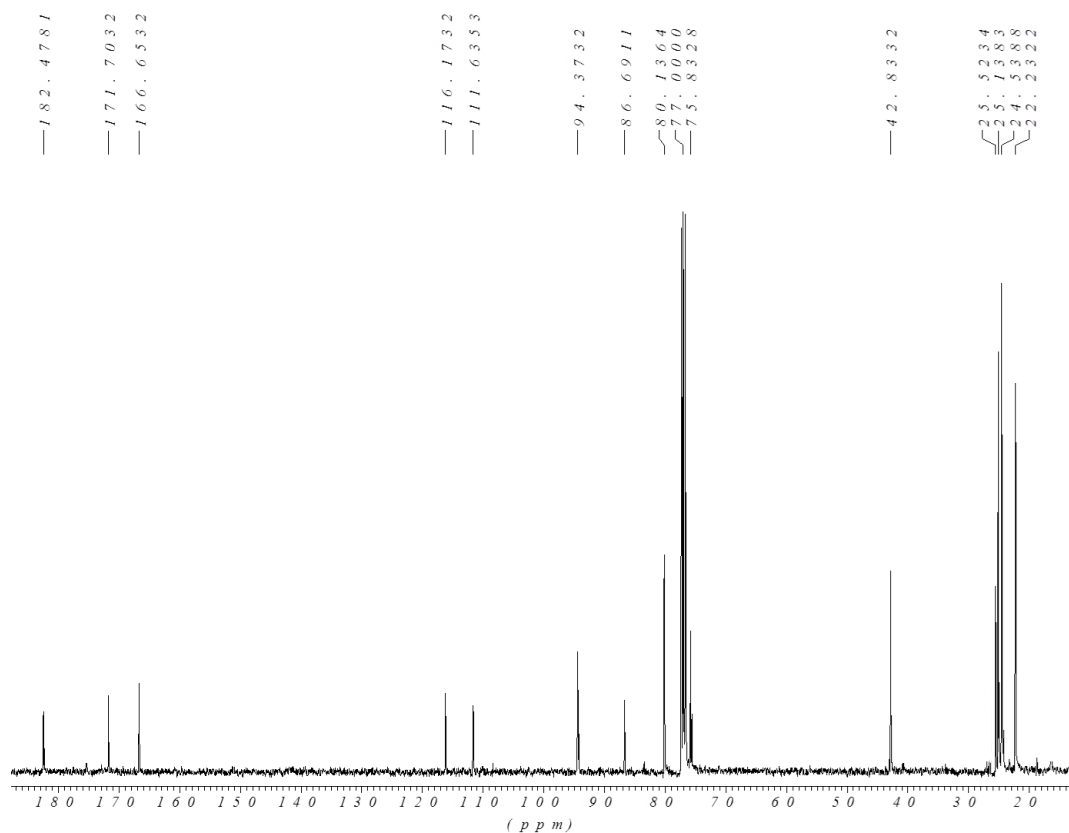
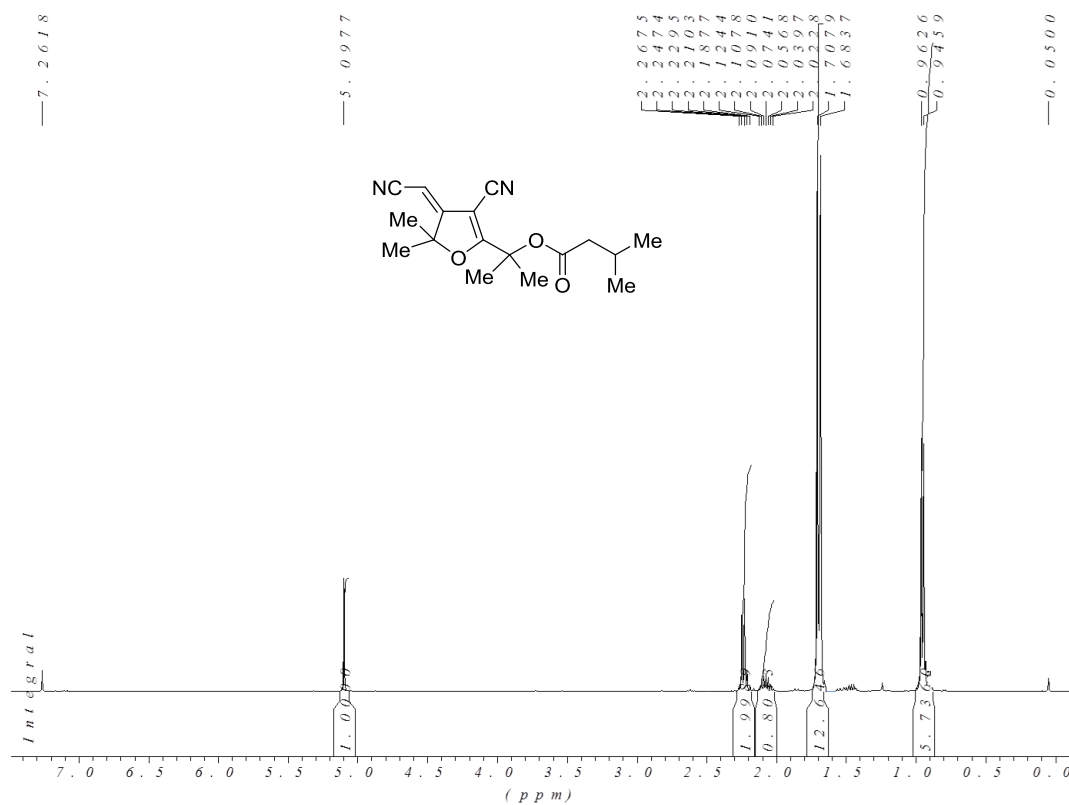


(Z)-2-[3-Cyano-4-(cyanomethylene)-5,5-dimethyl-4,5-dihydrofuran-2-yl]propan-2-yl isobutyrate (3d)



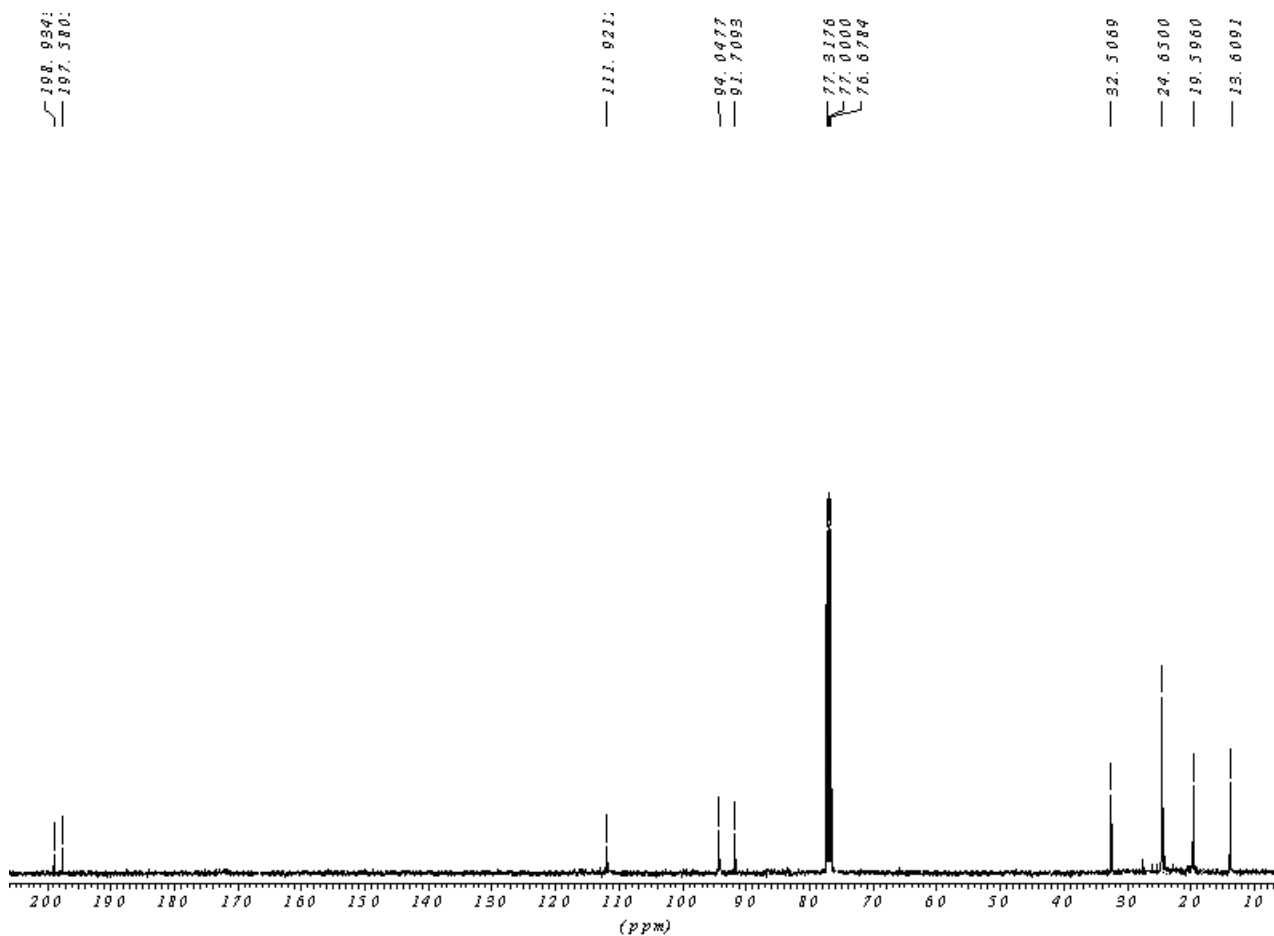
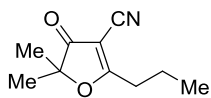
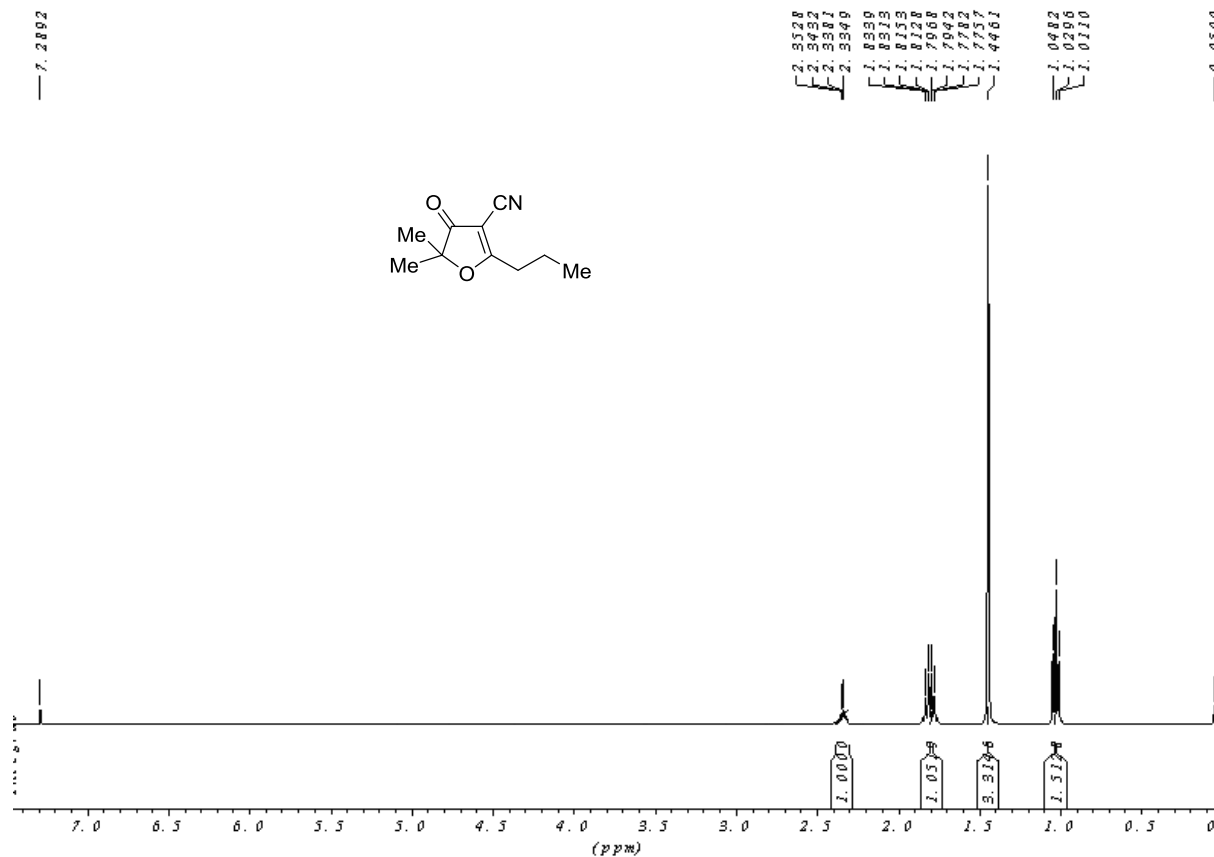
(Z)-2-[3-Cyano-4-(cyanomethylene)-5,5-dimethyl-4,5-dihydrofuran-2-yl]propan-2-yl 3-methylbutanoate

(3e)

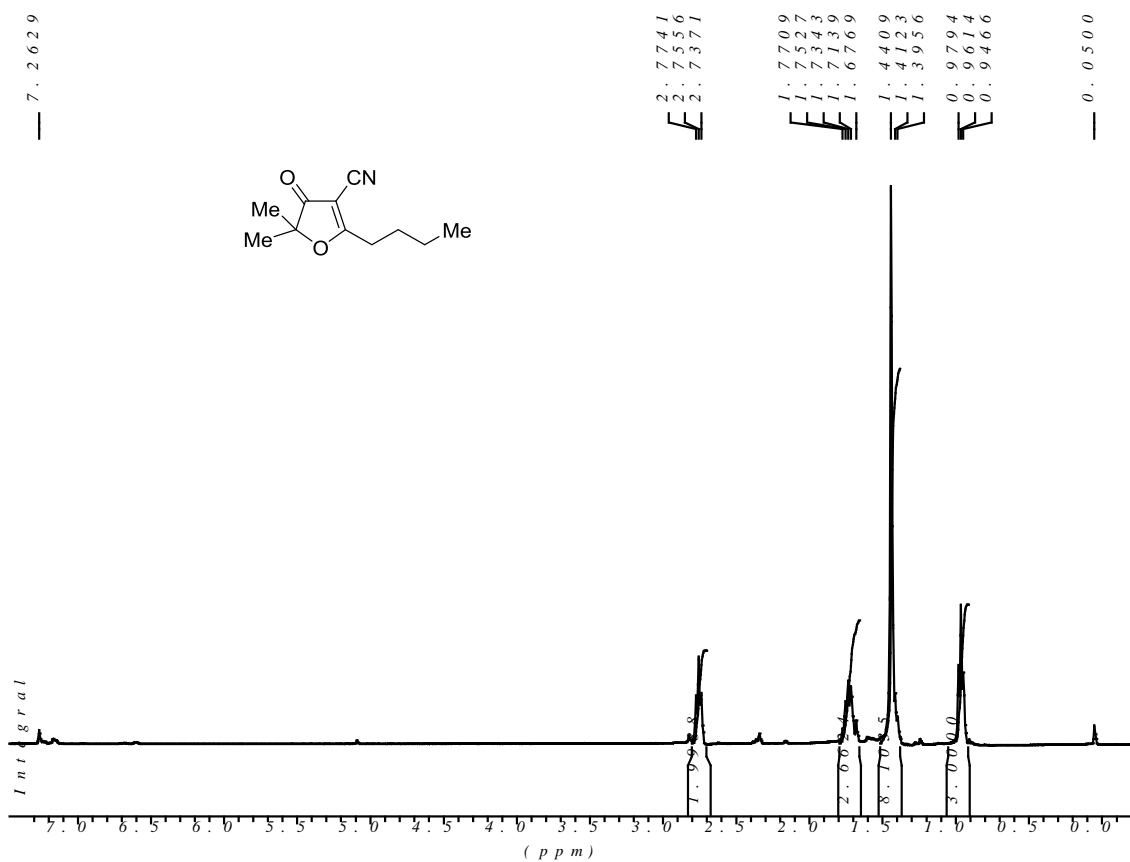


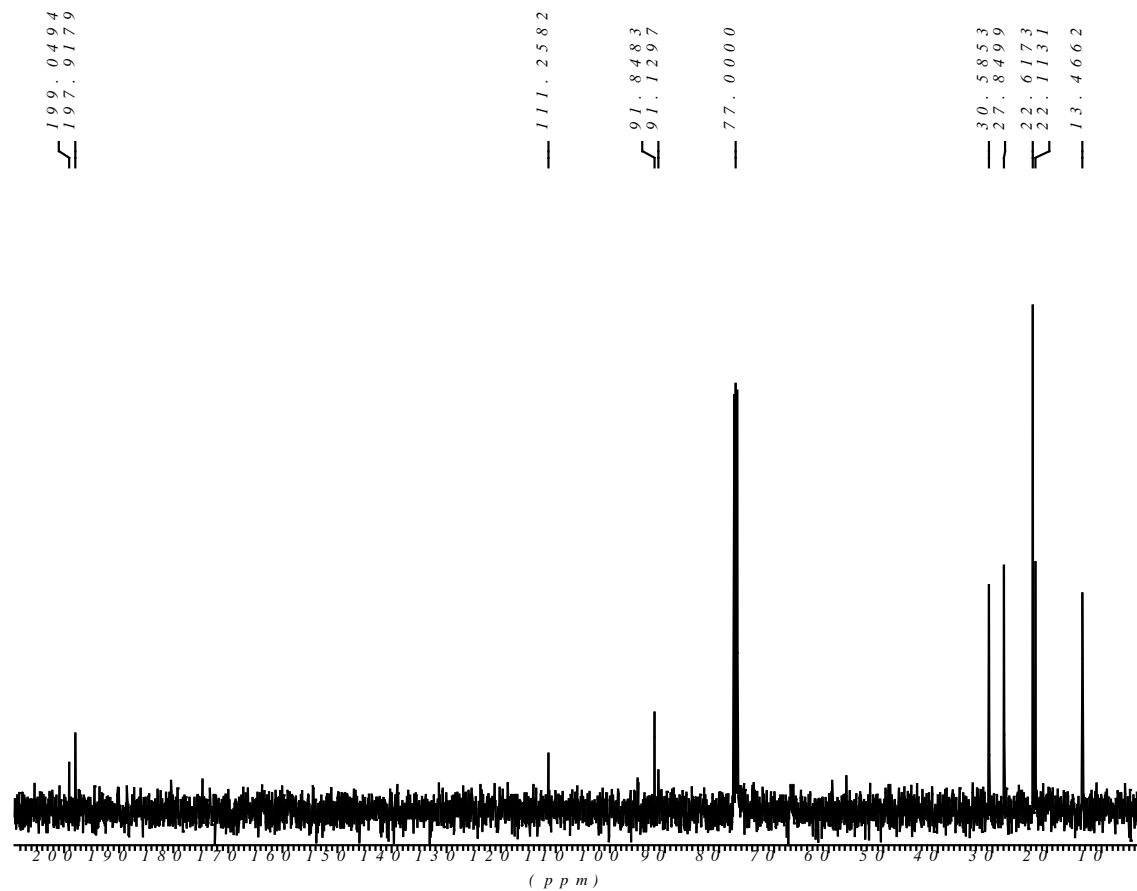
2. ^1H and ^{13}C spectra of the synthesized products 4b-e

5,5-Dimethyl-4-oxo-2-propyl-4,5-dihydro-3-furancarbonitrile (4b)

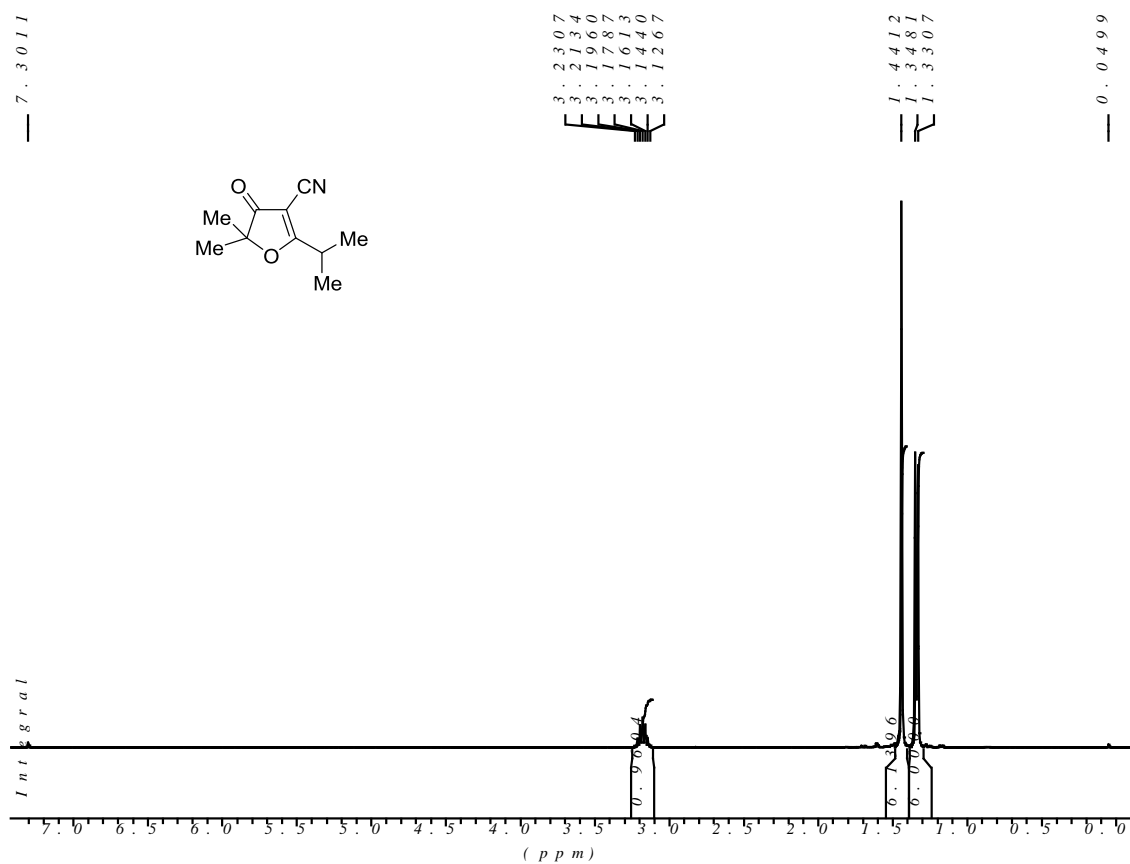


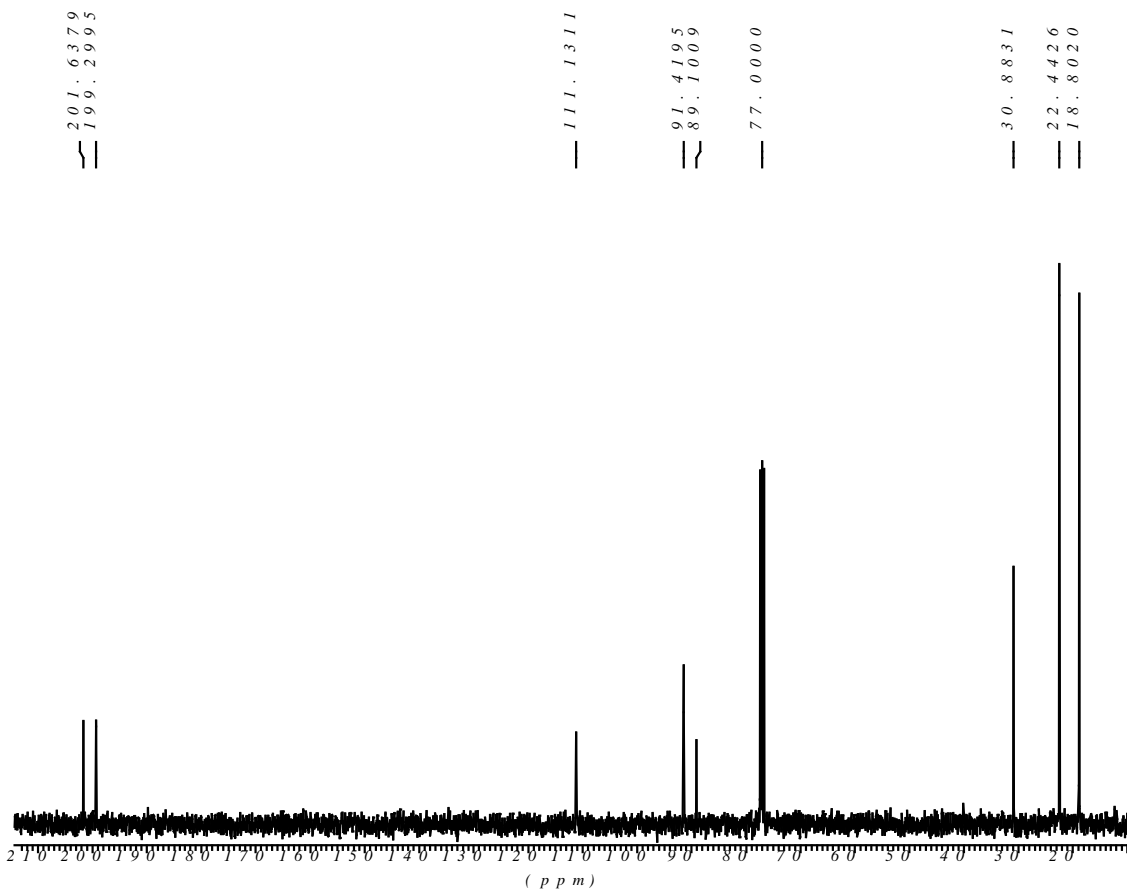
2-Butyl-5,5-dimethyl-4-oxo-4,5-dihydro-3-furancarbonitrile (4c)





5,5-Dimethyl-4-oxo-2-propyl-4,5-dihydro-3-furancarbonitrile (4d)





2-Isobutyl-5,5-dimethyl-4-oxo-4,5-dihydro-3-furancarboxitrile (4e)

