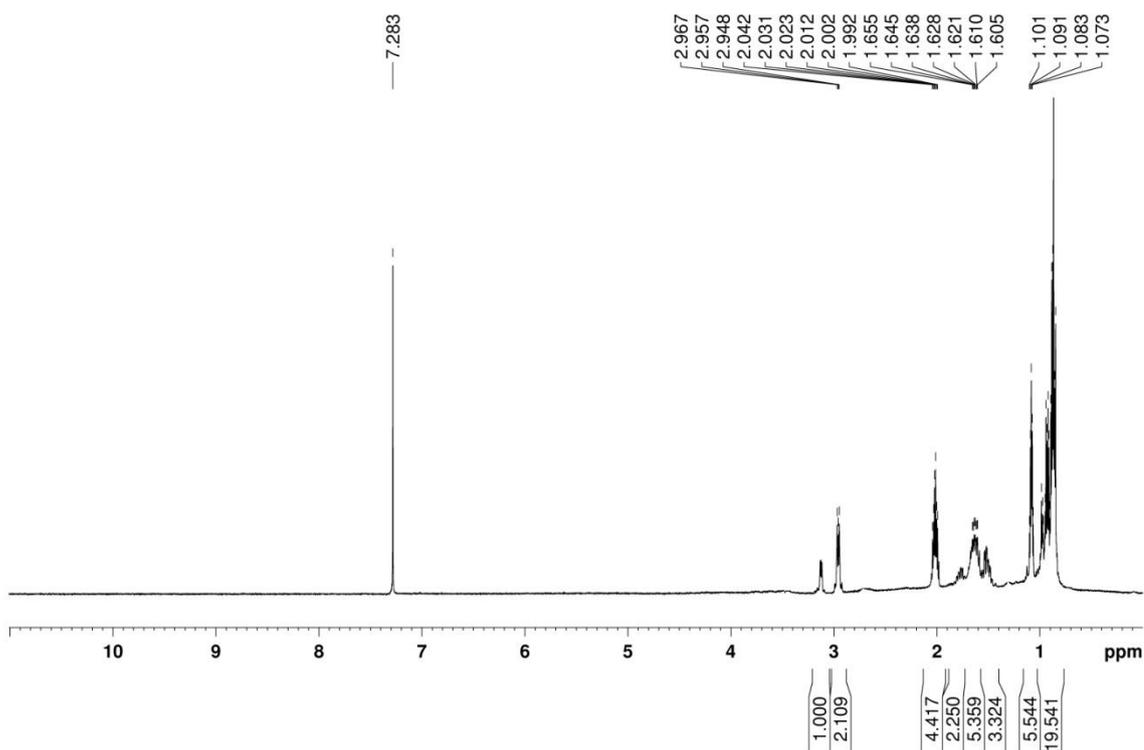


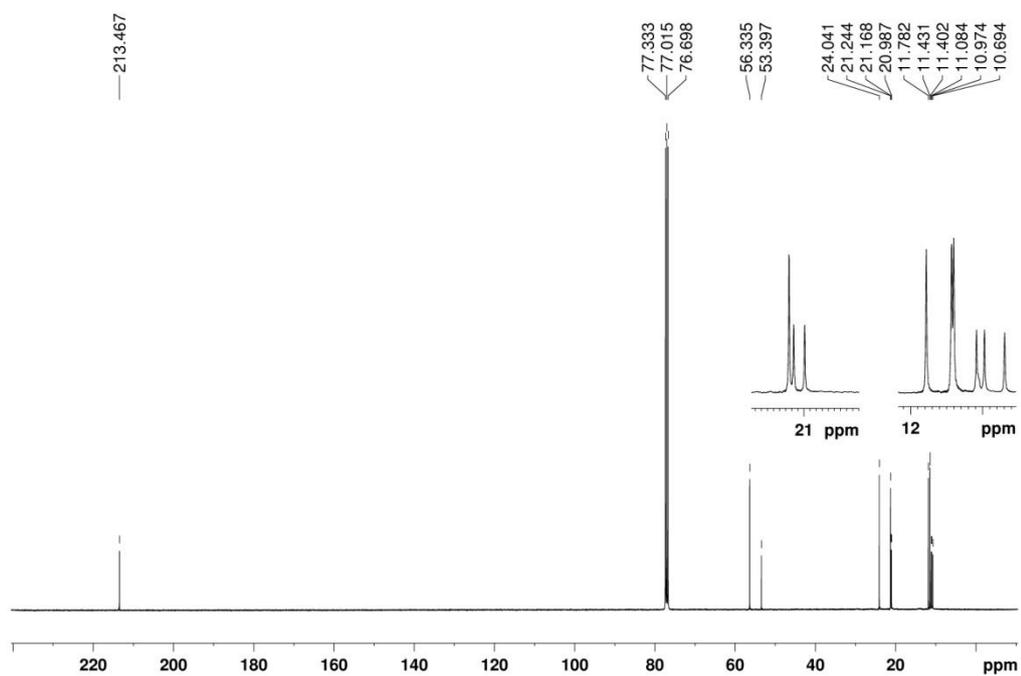
Effective one-pot synthesis of 2,3-dialkyl-1,4-dicyclopropylbutane-1,4-diones catalyzed by Cp_2TiCl_2

Leila O. Khafizova, Mariya G. Shaibakova, Nuri M. Chobanov, Tat'yana V. Tyumkina, Rinat R. Gubaidullin, Natal'ya R. Popod'ko and Usein M. Dzhemilev

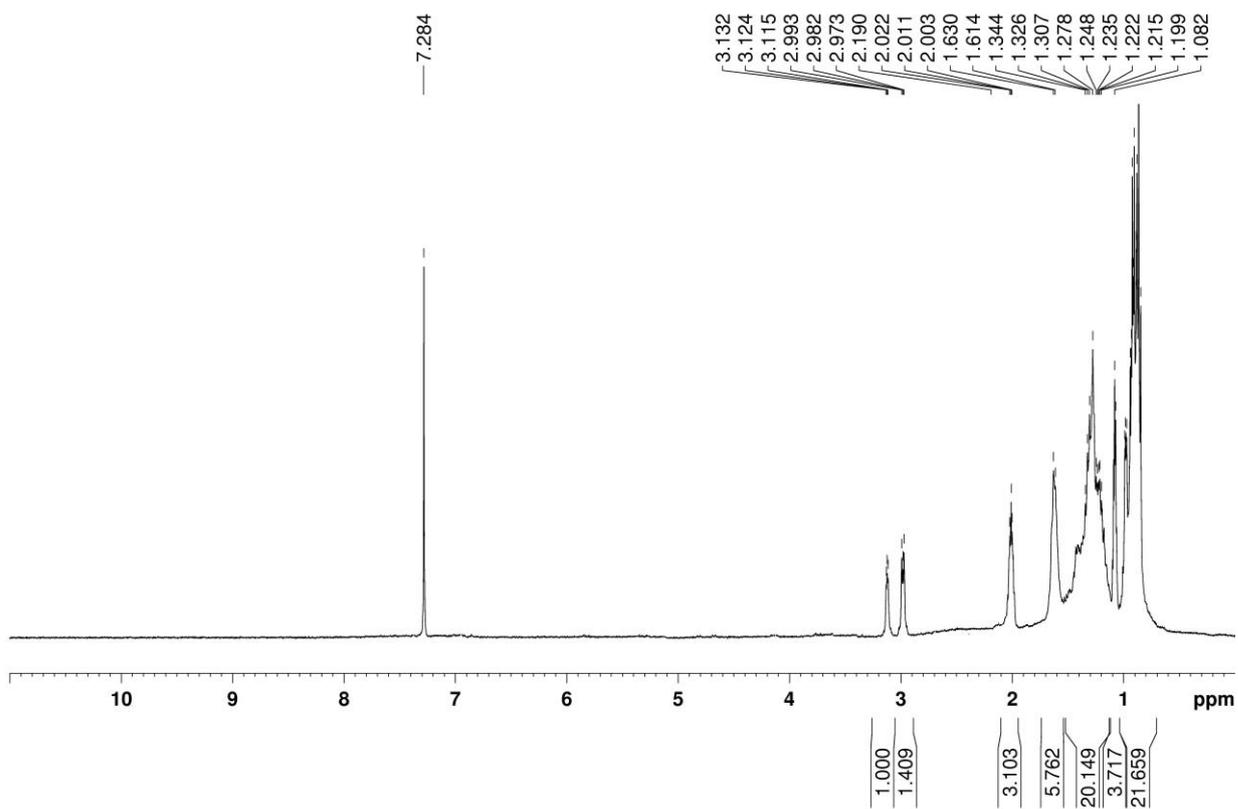
1,4-Dicyclopropyl-2,3-diethylbutane-1,4-dione **2b** ^1H NMR spectra (CDCl_3)



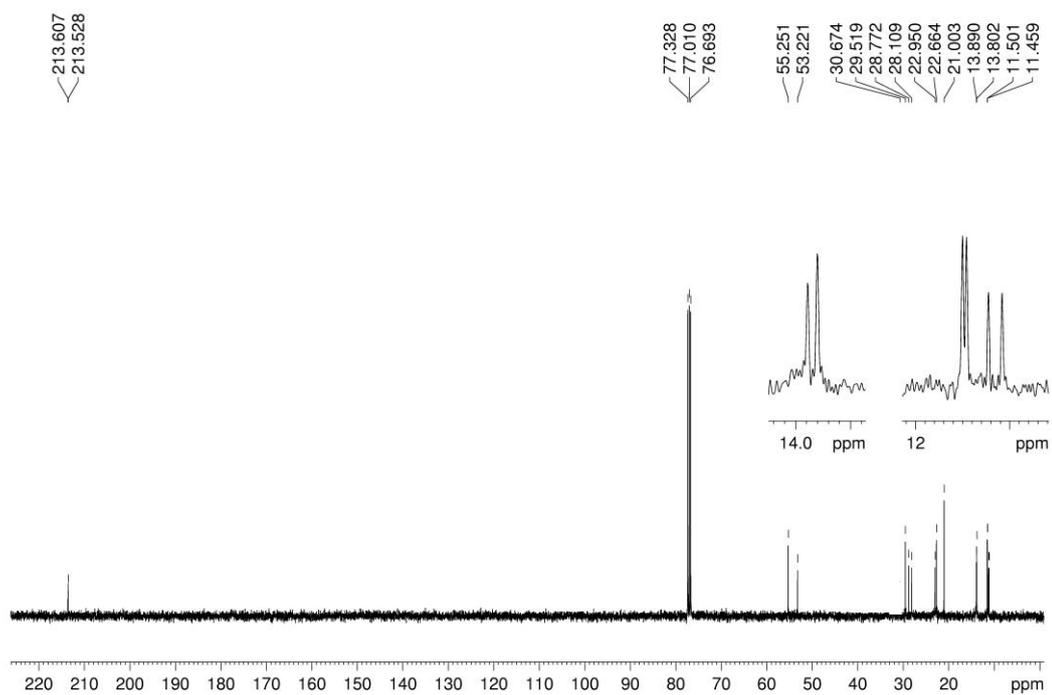
1,4-Dicyclopropyl-2,3-diethylbutane-1,4-dione **2b** ^{13}C NMR spectra (CDCl_3)



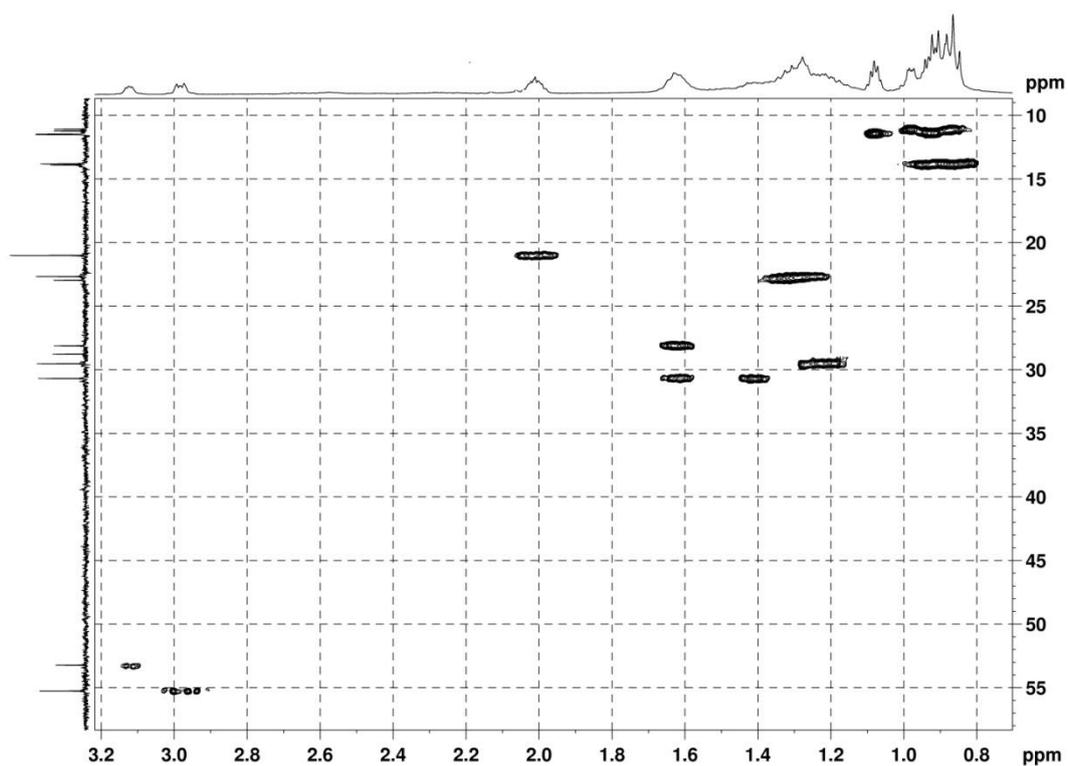
2,3-Dibutyl-1,4-dicyclopropylbutane-1,4-dione **2c** ^1H NMR spectra (CDCl_3)



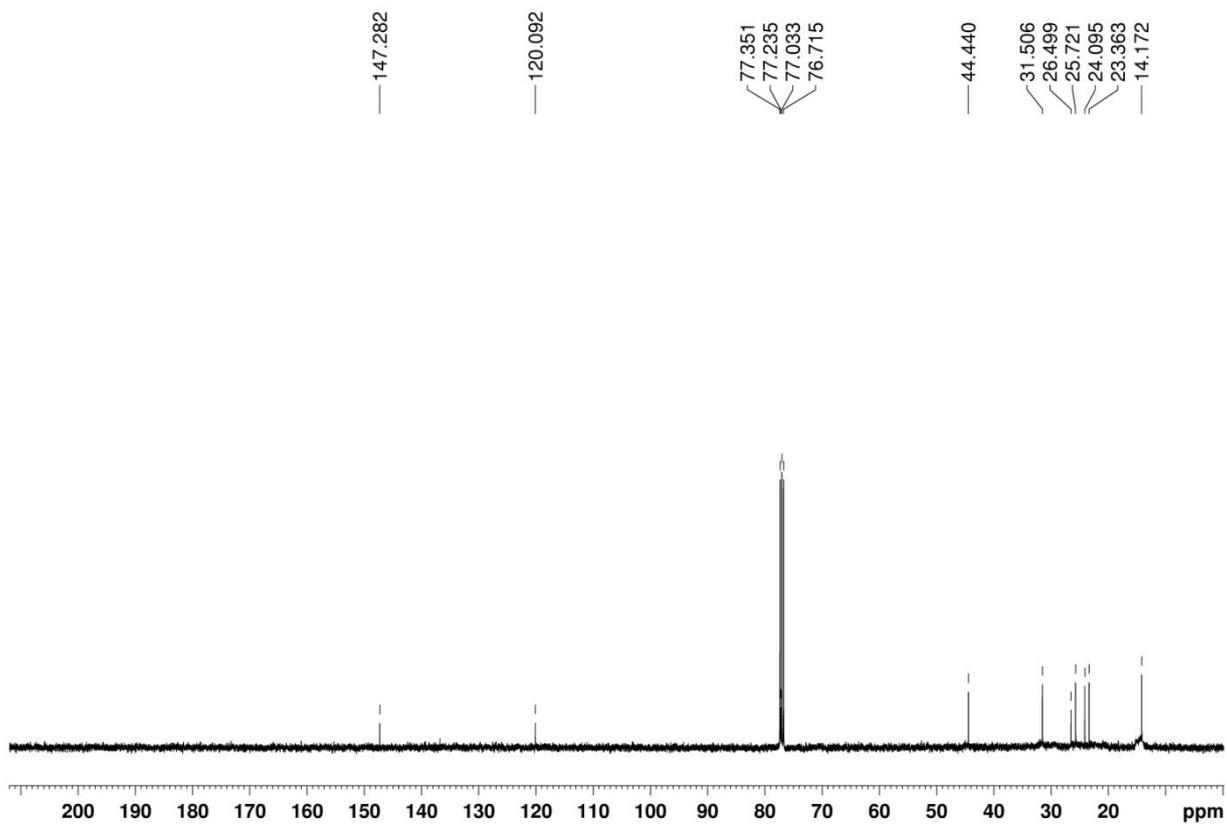
2,3-Dibutyl-1,4-dicyclopropylbutane-1,4-dione **2c** ^{13}C NMR spectra (CDCl_3)



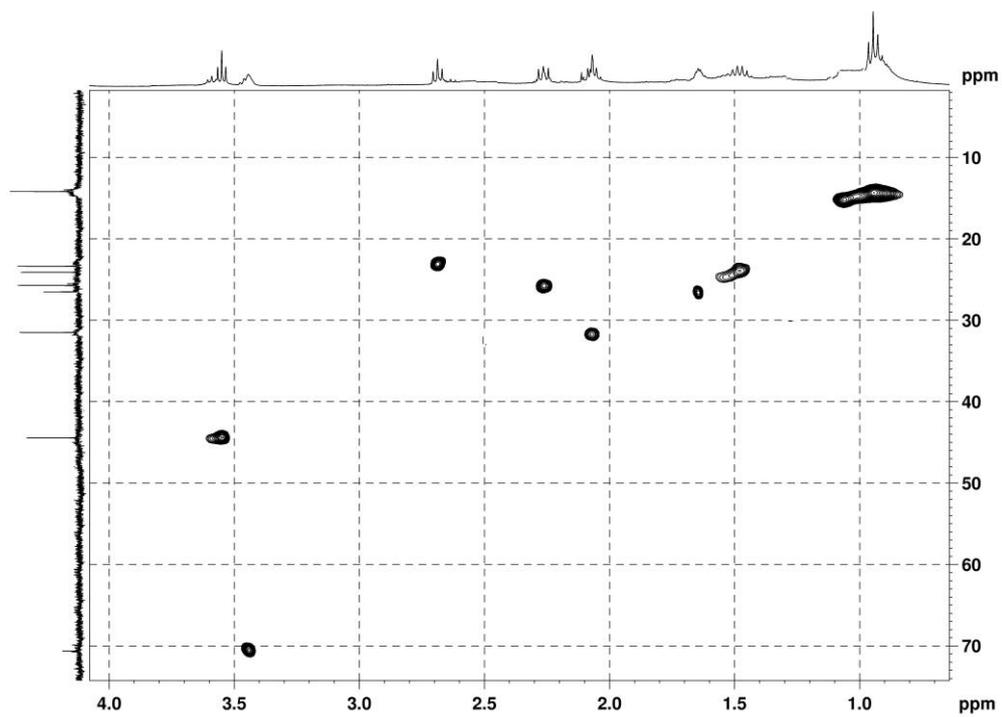
2,3-Dibutyl-1,4-dicyclopropylbutane-1,4-dione **2c** HSQC NMR spectra (CDCl_3)



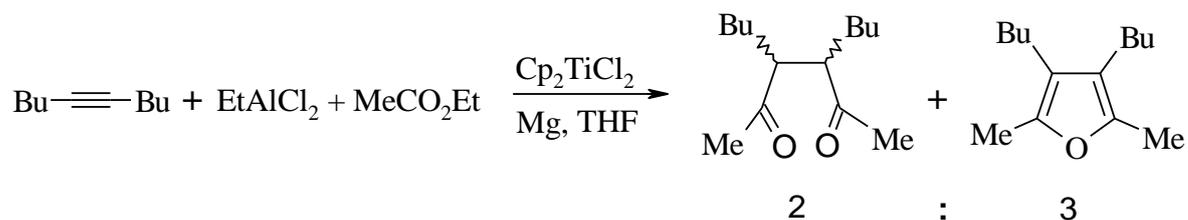
2,5-Bis(3-chloropropyl)-3,4-dipropylfuran **6** ^{13}C NMR spectra (CDCl_3)



2,5-Bis(3-chloropropyl)-3,4-dipropylfuran **6** HSQC NMR spectra (CDCl_3)



Composition of products in the sample in 1 hour after the beginning of the reaction between symmetrical acetylenes, EtAlCl₂, and carboxylates.



The chromatate-mass spectrum for the sample of the reaction mixture after 1 h from the beginning of the reaction

