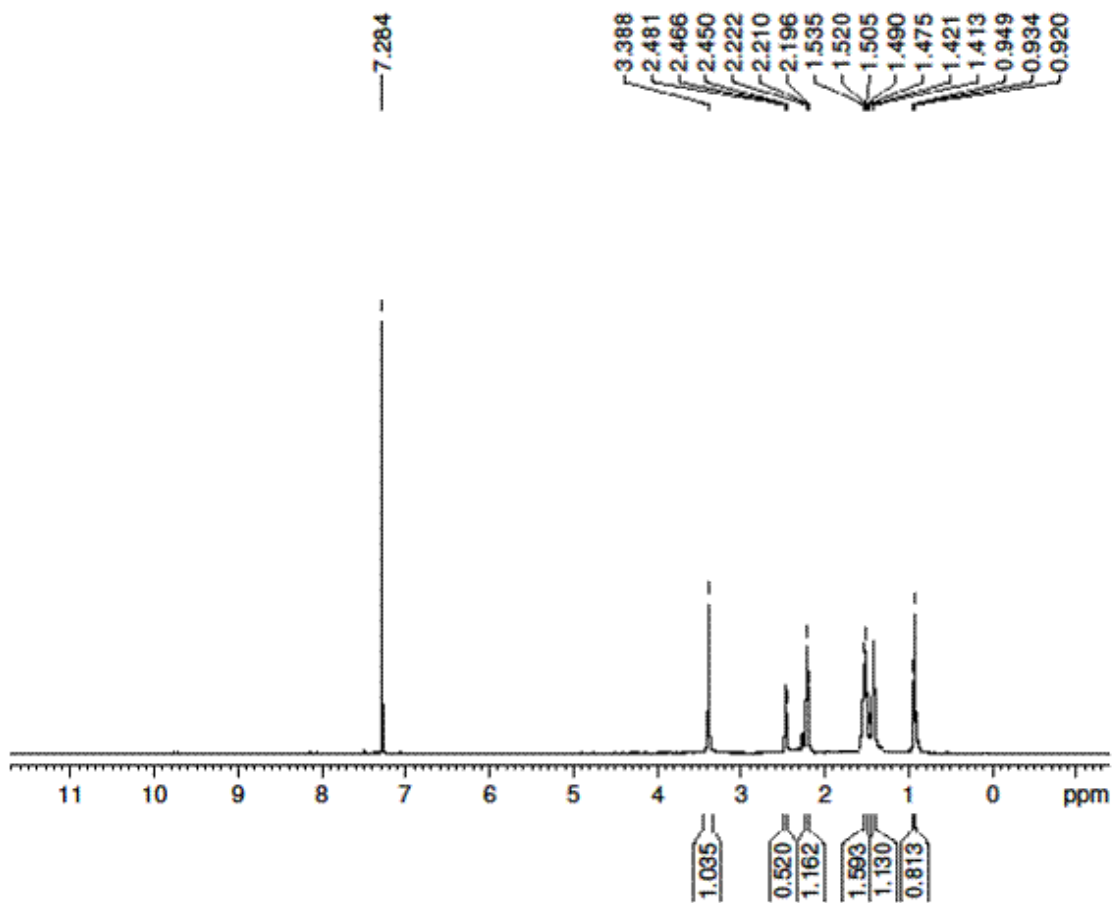


**One-pot synthesis of azacyclodiynes by reaction of  $\alpha,\omega$ -diacetylenes with 1,5,3-dioxazepanes using copper-containing catalysts**

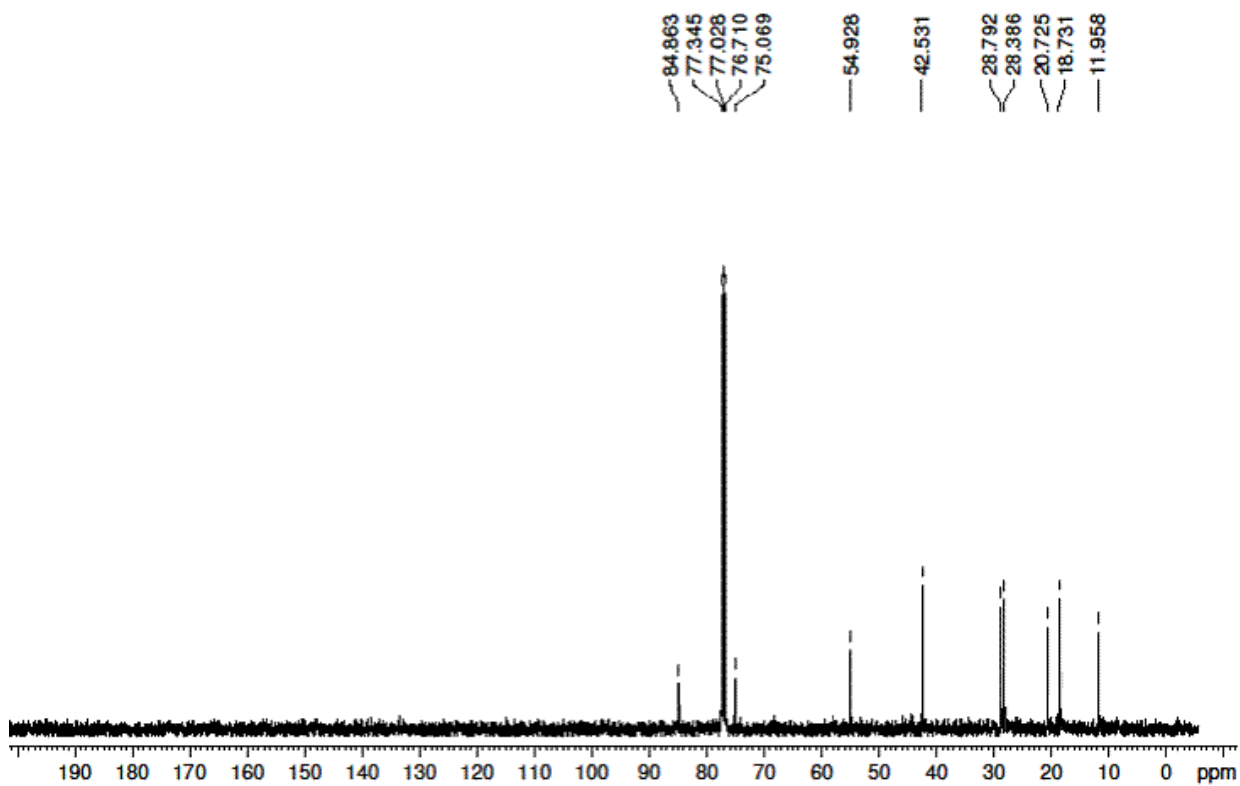
**Guzel R. Khabibullina<sup>1\*</sup>, Firuza T. Zaynullina<sup>1</sup>, Boris I. Kutepov<sup>1</sup>, Askhat G. Ibragimov<sup>1</sup>, Usein M. Dzhemilev<sup>1</sup>**

**SUPPLEMENTARY INFORMATION**

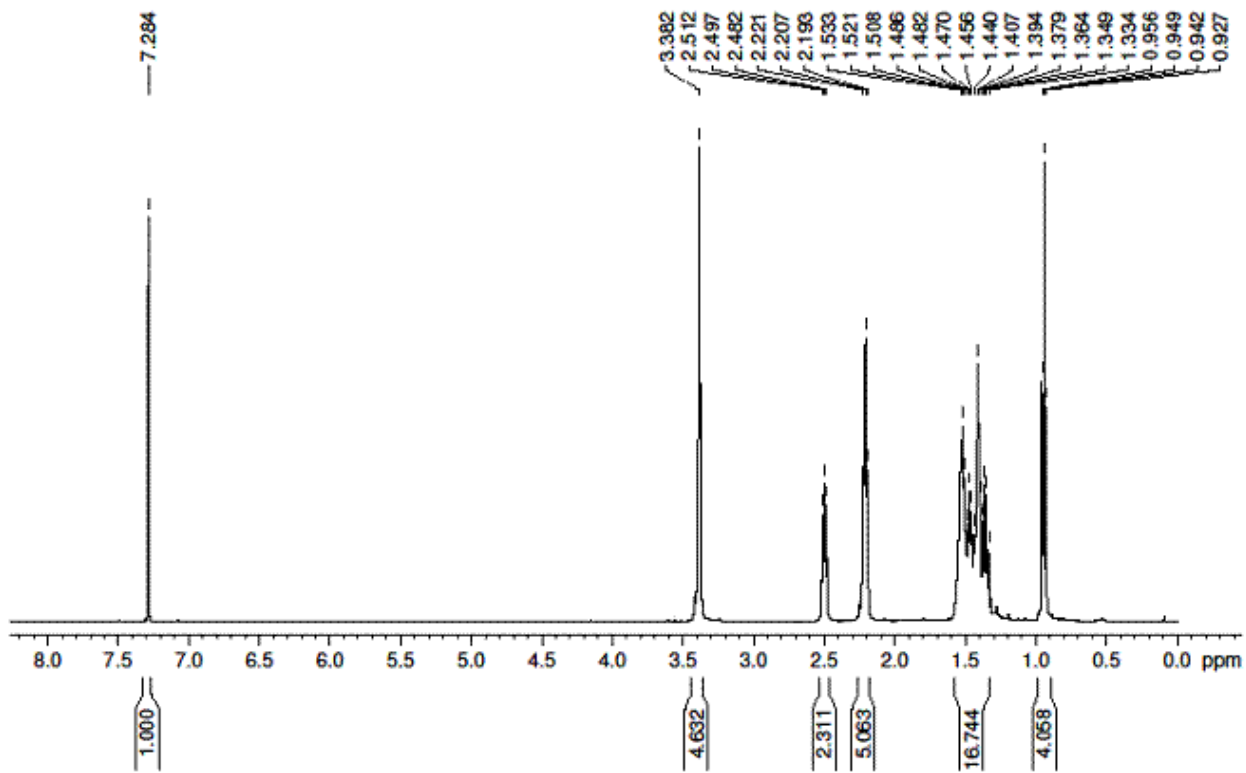
<sup>1</sup> *Institute of Petrochemistry and Catalysis, Russian Academy of Sciences, 141 Oktyabrya Ave., Ufa 450075, Russia; e-mail: khabibguzel@gmail.com*



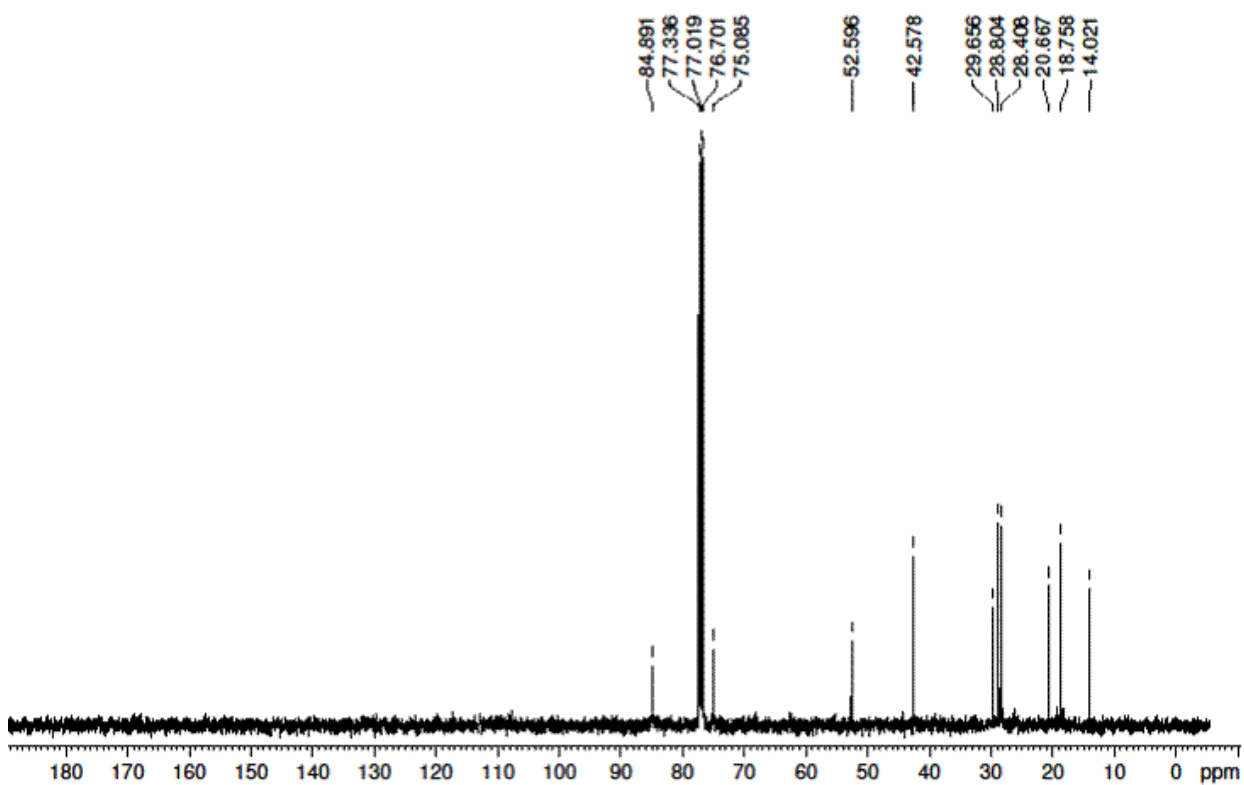
$^1\text{H-NMR}$  spectrum of 1-propyl-1-azacyclotrideca-3,11-diyne (**3b**).



$^{13}\text{C-NMR}$  spectrum of 1-propyl-1-azacyclotrideca-3,11-diyne (**3b**).



$^1\text{H-NMR}$  spectrum of 1-butyl-1-azacyclotrideca-3,11-diyne (**3e**).



$^{13}\text{C-NMR}$  spectrum of 1-butyl-1-azacyclotrideca-3,11-diyne (**3e**).