Abstract

Copper (I) mediated Huisgen 1,3 dipolar cycloaddition of 4-(piperidine-1-yl)-N-(prop-1-yne-3-yl)-1,8-naphtalimide (PN) to poly($\alpha N_3\varepsilon$CL-co-εCL) of three different molar ratio of $\alpha N_3\varepsilon$CL was performed. Reaction was succesfull for poly($\alpha N_3\varepsilon$CL-co-εCL) with molar fraction of $\alpha N_3\varepsilon$CL f = 0,22. No degradation of substituted PCL was observed during the synthetic path, therefore the PN molecule is suitable for click coupling to well defined polyester. New aliphatic polyester based on polycaprolactone was synthesized and characterized by means of ^{1}HNMR spectra and Gel permeation chromatography calibrated with polystyrene standards. The spectra of other two copolymers coupled with PN were not measured due to their low solubility in common organic solvents.

Keywords: living polymerization, α-chloro-ε-caprolactone, click reaction