

Abstract

Mostly new acetylene based monomers were prepared. All monomers were prepared by the means of standard spectroscopic methods. All monomers were successfully polymerized using standard metathesis TaCl₅ based catalyst. Prepared polymers were characterized by the means of GPC/GPC-MALLS chromatography and standard spectral methods. Fluorescence properties of all prepared compounds were also studied: quantum fluorescence yields were determined and excitation and emission fluorescence spectra were recorded. Polymerization on modern metathesis Grubbs-Hoveyda catalytic systems of all prepared monomers was also tested. These reactions were only partially successful and only low molecular weight oligomers in mediocre yields were obtained.