ABSTRACT

Charles University in Prague
Faculty of Pharmacy in Hradec Králové
Department of Inorganic and Organic Chemistry

The Institute of Macromolecular Chemistry of the Academy of Sciences
Department of Polymers for Optoelectronic Applications

Candidate: Pavla Skalická
Supervisor: Doc. PharmDr. Miloš Macháček, CSc.
Consultant: Ing. Drahomír Výprachtický, CSc.

Title of thesis: Synthesis and analysis of π-conjugated copolymer containing carbazole structural unit

Aim of this thesis was the synthesis of π-conjugated copolymer containing carbazole structural moiety which would be attached to the main chain via its carbons 2 and 7.

Following the successful preparation of 2,7-dibromocarbazole and the modification of nitrogen heteroatom, Suzuki coupling reaction employing 9,9-dialkyl-2,7-bis(1,3,2-dioxaborinan-2-yl)fluorens led to the synthesis of four target copolymers.

Futhermore, in consideration of the potential application in optoelectronics, absorption, luminescence and electroluminescence spectra of the selected compounds were recorded.