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Synthesis and Characterization of Novel Polyamide and Polyhydrazides Based on the 6,6´-disubstituted-2,2´-bipyridine

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Keywords
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Abstract: The monomers namely 6,6'-dicarbonylchloride-2,2'-bipyridine (1) and 6,6'-dihydrazine-2,2'-bipyridine (2) were synthesized and characterized thoroughly. The polyhydrazides (PHZ1 and PHZ2) were obtained by direct polycondensation of 2 with terephtaloylchloride (TPCl}), and novel polyamide (PA1) by direct polycondensation of 1 with hexametyhlenediamine (HMDA}). Polymers with low PDIs were generated in all cases (PD \sim 1.02-1.3). The polymers were characterized by ^{1}H and ^{13}C NMR, FT-IR, and Gel Permission Chromatography (GPC).

Key Words: Bipyridine, polyamide, hydrazide, polymer, terephtaloylchloride

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