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(54) **Title:** METHOD FOR PREPARING DIOXYHETEROCYCLE-BASED ELECTROCHROMIC POLYMERS

(57) **Abstract:** A method for preparing a conjugated polymer involves a DHAP polymerization of a 3,4-dioxythiophene, 3,4-dioxyfuran, or 3,4-dioxypyrrole and, optionally, at least one second conjugated monomer in the presence of a Pd or Ni comprising catalyst, an aprotic solvent, a carboxylic acid at a temperature in excess of 120 °C. At least one of the monomers is substituted with hydrogen reactive functionalities and at least one of the monomers is substituted with a Cl, Br, and/or I. The polymerization can be carried out at temperature of 140 °C or more, and the DHAP polymerization can be carried out without a phosphine ligand or a phase transfer agent. The resulting polymer can display dispersity less than 2 and have a degree of polymerization in excess of 10.

