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Authors: P. Pander, A. Swist, P. Zassowski, J. Soloducho, M. Lapkowski, P. Data

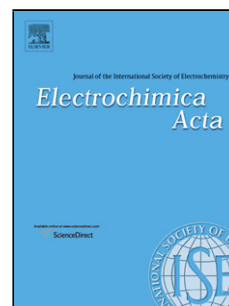
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Electrochemistry and spectroelectrochemistry of polymers based on D-A-D and D-D-D bis(*N*-carbazolyl) monomers, effect of the donor/acceptor core on their properties

P. Pander^{a,b}, A. Swist^d, P. Zassowski^a, J. Soloducho^d, M. Lapkowski^{a,c}, P. Data^{* a,b,c,1}

^a Faculty of Chemistry, Silesian University of Technology, M. Strzody 9, 44-100 Gliwice, Poland

^b University of Durham, Physics Department, South Road, Durham DH1 3LE, United Kingdom

^c Center of Polymer and Carbon Materials, Polish Academy of Sciences, M. Curie-Skłodowskiej 34, 41-819 Zabrze, Poland

^d Wrocław University of Technology, Faculty of Chemistry, Wybrzeże Wyspiańskiego 27, 50-370 Wrocław, Poland

E-mail: przemyslaw.data@durham.ac.uk

ABSTRACT

In this work we present electropolymerization of monomers of an unusual type using *N*-linked carbazole units to limit their conjugation. The polymers thus obtained have limited conjugation through the backbone. Using donor-acceptor-donor (D-A-D) and donor-donor-donor (D-D-D) monomers we evaluate the effects of the presence (or absence) of charge transfer states on synthesized electropolymers. The use of a D-A-D monomer resulted in obtaining an ambipolar polymer with *quasi*-reversible reduction.

Keywords: carbazole; phenothiazine; acridone; electroactive polymer; spectroelectrochemistry

1 Introduction

Electroactive polymers are an already very well-examined group of materials with many interesting properties, that can be used as conductive and semiconductive layers, [1,2] polymer light emitting diode (PLED) emitters [3,4] and hosts, [5,6] electrochromic films [7-12] for the use in electrochromic windows, electrochemical capacitor materials, [13] controlled drug release systems, [14-16] membrane matrices, [17] electrostrictive materials, such as artificial muscles [18] and many more.

¹ISE member

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