

The Properties of Conducting Polymers and Substrates for Printed Electronics

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Abstract

The present work deals with the preparation and properties of a conductive polymer and effect of paper properties on conventional silver-based conducting inks. Polyaniline was prepared using template guided polymerization in the presence of different lignosulfonic acids. Characterization of prepared polymers was performed using Fourier Transform Infrared (FTIR) spectroscopy and thermal behavior was studied using Differential Scanning Calorimetry (DSC). Electrical properties of polymers were studied in the form of polymer films as well as pressed pellets. Electrical properties of silver inks on different paper substrates were also studied.