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Micro-fabrication of Organic Devices[1] SHABANA SULTANA, Southwest Missouri State University — Conducting polymers have unique optical, electrical and mechanical properties. Their combined plastic like property with the additional advantage of conductivity either in the metallic or semiconducting regimes have opened up many new possibilities for micro–electronic devices. Hence, fabrication of organic micro-devices was the focus of this experiment. Conducting polyaniline with different doping has been used. It is an experimental material developed by Crosslink Polymer Research, a Division of Lumimove, Inc. The technique involves patterning of the polymer on the substrate, silicon wafer. The patterned polymer is in the form of arrays consisting of square pads ranging from 15micro m in length to 125micro m. Since, the nature of the surface properties is critical for functioning of electronic products, their surface properties were studied by scanning electron microscope and atomic force microscopy. Electrical characterization has also been performed on these devices using the 4-probe method. From preliminary results, a linear curve is expected for I-V characterization.

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