

## **"ELECTROCHROMIC FILMS AND FIBERS FOR SMART SKIN APPLICATION"**

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The development of conjugated polymers and biological materials as nanofibers could provide many benefits especially with respect to diffusion related processes. Our group has been involved with the electrostatic spinning of electrochromic nanofibers and of biological polymers with enhanced electro-optical properties. Using a precursor polymer approach to the preparation of polythiophenes, we have been able to electrospin nanofiber mats having the ability to rapidly switch between blue and orange. We will further report on new materials with alternative color transitions in addition to preparation of core/shell nanofibers. Salmon DNA has been shown to be a nice hole injection layer for light emitting diodes. Here, we will report electrostatic spinning of Salmon DNA-CTMA complex from alcohol in addition to formation of nanofibers from water. Salmon DNA nanofibers containing fluorescent dye gave enhanced fluorescence in comparison to Salmon DNA/fluorescent dye films. Use of this property will be shown with respect to its use as a sensor.