

# RESEARCH ON FAST DETECTION SENSOR BASED ON POLYMER MATERIALS

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**P**olymer materials interact according to their nature with stimuli in their environment. Polymer materials and computing technology in textile structures offers an opportunity to develop textiles with a new type of behaviour and functionality. Polymer materials are biological or non-biological materials that have one or more properties that can be changed significantly in a controlled way under the influence of external stimuli. Conjugated polymer thin films and other sensing materials have indicated that very fast fully responses and high sensitivity natures. Polymer materials may be of particular relevance to a specific application that enables unique operation of a process. Sensor based polymer materials can contribute to the industrialization of environmentally friendly applications for the general benefit of society in many ways. For example, they may facilitate the avoidance of harm to humans and the environment by substituting for and reducing the need for harmful chemicals (e.g. enable a move away from plastics or flame retardant materials). Emerging materials need to be tested carefully for toxicology to avoid problems encounter historically (e.g. PCBs).

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