

Highly Tolerant Semiconducting Polymer Gels for Organic Chemosensor

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Basically, physical, optical, chemical and mechanical characteristics of semiconducting polymer films can be sensitively affected by the introduction of functional blocks, which can be very critical in the field of organic sensory systems.

Herein, we present a novel methodology capable of endowing an efficient functionalization of semiconducting polymers embedded into the interpenetrating polymer networks (IPNs) through functional organosilane molecules. In particular, this functionalized state could be effectively controlled via solution-processed chemisorption of organosilane molecules. Also, we found that films display chemical and physical resistance unlike neat films that are easily dissolved into conventional organic solvents. We believe that novel material design proposed by us will open up highly tolerant and sensitive organic sensory systems.