

Photoelectrical Behaviour of DNA:PEDT-PSS Functionalised Films

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R�sum� en anglais	<p>We report investigations of functionalized DNA:PEDT-PSS films. The thermal activation energy of the conductivity near the room temperature was about 0.033 eV. The weak carrier trapping was identified by the therm ally stimulated current method, proving the fast recombination of light-generated :carriers. A "bistable" photoconductivity below the room temperature was evidenced upon the white light excitation. By cooling the. samples down to 145-155 K the photoconduction was small. Below this temperature sudden increase of the photoconductivity was observed. Meanwhile by heating the photosensitivity remained enhanced up to 235-245 K. The slow relaxations of the current after the light excitation took place, the time constant of which reached several hundreds of seconds. Such phenomenon could presumably be attributed to the light-induced changes of the sample material morphology and/or associated variation of carrier transport conditions.</p>
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