

## **Polymer Nanocomposite Solar Cells based on in-situ formed $\text{CuInS}_2$**

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The development of a new  $\text{CuInS}_2$  in-situ formation process, where the formation of the  $\text{CuInS}_2$ -nanocrystals takes place within the matrix of the organic semiconductor will be presented. Therefore we prepared stable precursor solutions containing metal xanthate precursor materials and photoactive polymers like PCDTBT or PSiF-DBT from solvents like toluene or chlorobenzene. By using this concept we were able to prepare nanocomposite solar cells with a homogenous distribution of organic and inorganic phase within the photoactive layer that showed efficiencies above 2% by using the following assembly: glass / ITO / PEDOT:PSS / (CIS/polymer) / cathode.