

**Photoinduced absorption studies on conjugated
polymer/fullerene mixtures at low temperatures and
high modulation frequencies**

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Photoinduced absorption is a useful technique to study the charge-separated state in conjugated polymer fullerene mixtures. We apply this technique to thin films of (poly(2-methoxy,5-(3',7'-dimethyloctyloxy)-1,4-phenylenevinylene) (MDMO-PPV) and [6,6]Phenyl C61butyric acid methylester (PCBM). Working at low temperatures (~20 K) and different light modulation frequencies we observe different polaronic features in the PIA spectrum which can be associated with slow relaxation and fast relaxation polarons. Experiments will be presented which allow to separate photoinduced absorption related to interchain and intrachain polarons.