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Charge generation from Fullerene Exciton in Low band Gap polymer based solar cells.

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The bulk heterojunction of a donor polymer and fullerene derivatives is common active layer in organic solar cells. The choice of fullerenes plays an important role in the efficiency. The fullerene, [6,6]-phenyl-C71-butylic acid methyl ester (PCBM71) is chosen in many cases over [6,6]-phenyl-C61-butylic acid methyl ester (PCBM61) for its higher absorption in the visible. We investigated the charge dynamics of bulk heterojunction of therthiophene-isoindigo as a donor and two fullerene derivatives PCBM71 or PCBM61 as acceptors using femtosecond-transient absorption spectroscopy. The samples were pumped at 388 nm to effectively pump the fullerene and not the donor polymer.

Apply to be
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PhD

Main supervisor (name and email)
and his / her institution

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No

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