

# **Drift-Diffusion-Recombination Models for Excitonic Organic Photovoltaic Devices**

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We present some recent results and ongoing work on drift-diffusion-reaction systems modelling organic photovoltaic devices. While classical semiconductors show recombination typically throughout the whole device feature organic photovoltaic devices significant charge generation only in the very proximity of an interface between two different organic polymers. We discuss basic questions of modelling, existence and stationary states and current voltage characteristics. Moreover, we present some interesting asymptotic approximations and discuss the use of entropy.