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Hot charge separation process in MoS2/WSe2 heterostructure based solar cell ZHENZHU LI, Peking Univ — We investigated the charge separation processes happened before the formation of tight bounded exctions in MoS2/WSe2 heterostructures, which is viewed as an essential step to facilitate the high quantum efficiency of solar cells based on such material geometry. In this work, we try to figure out whether it is the charge transfer process or energy transfer process that dominating the charge separation process and their corresponding time domain, which could be confirmed with experimental results.

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