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**A novel pyrrolocarbazole donor for stable and highly efficient
thermally activated delayed fluorescent emitters**

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Abstract

A novel pyrrolocarbazole moiety was developed as a new donor moiety of thermally activated delayed fluorescent emitters. The new pyrrolocarbazole donor moiety possessed stronger donor strength than carbazole and better stability than acridine, which enhanced the quantum efficiency and lifetime of the thermally activated delayed fluorescent emitters. The pyrrolocarbazole donor, diphenyltriazine acceptor, and a phenyl linker merged emitter performed as a highly efficient delayed fluorescent emitter by providing high quantum efficiency of 17.7%.

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