Luminescence from host-guest conjugated polymers

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A host-guest system leading to enhanced luminescence is investigated using a self-forming, solid-state solution of a conjugated polymer. Poly(fluorene-alt-thiophene)s (PFTs) were synthesized with varying ratios of 2,5- and 3,4-thiophene linkages. Copolymers possessing small quantities of the former gave rise to a pseudo host-guest system in which a matrix of 3,4-thiophene linked conjugated polymer transfers electronic excitation energy to isolated, emitting 2,5-thiophene linked conjugated segments.

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