



Electron-deficient bipyrrrole boomerangs: bright fluorophores obtained via double C—H bond activation.

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Streszczenie

Pd^{II}-mediated annulative double C—H activation is shown to efficiently convert 1,*n*-dipyrrolylalkanes into extensively π -conjugated bipyrrroles not accessible by conventional oxidative coupling protocols. This approach is applicable to both electron-rich and electron-deficient systems, and has been further developed into tandem processes involving further cyclization of substituents or oxygenation of pyrrolic α -positions. The new bipyrrrole intermediates show enhanced fluorescence as well as tunable optical properties controlled by the alignment of chromophore subunits. Photophysical data, including femtosecond transient absorptions, reveal solvent-induced intramolecular charge transfer in their excited states, dependent on the polarity of the medium.

Słowa kluczowe

C-H activation, charge transfer, fluorescence, helical structures, heterocycles

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