Controlling the Shape of bisFerrocene Macrocycles by the Bulkiness of the Substituents

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Herein we present the synthesis of two complementary bisferrocene macrocycles, build up via Sonogashira cross coupling and intramolecular ring closing reaction. While di-1,2-diethynylbenzene 1,1'-disubstituted ferrocene complex 1 shows a stacking behavior, the shape can be controlled by decorating the diethynylbenzene rings with bulky *tert*-butylsulfanyl groups, forming a stretched oriented bisferrocene complex 2. The stretched rhomboidal structure further shows a dynamic behavior regarding the rotation along the ethynyl-Cp axis. The structural variation is studied by dynamic NMR spectroscopy and the electrochemical nature of the two complementary bisferrocene complexes is investigated via cyclic voltammetry.

