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2011

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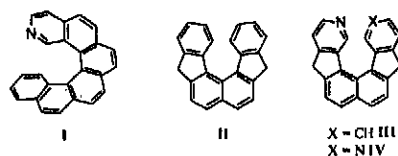
Datum stažení: 27.07.2024

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DESIGN AND SYNTHESIS OF HELICENE LIKE MOLECULES

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Azahelicenes **I** are unique inherently chiral three-dimensional aromatic compounds with high potential in homogenous asymmetric catalysis [1]. Their synthesis has many drawbacks and cannot be done in multigram scale so far [2, 3]. Recently, we have developed a route to new type of helicene-like molecules **II**. Multigram-scale synthesis of model compound where two benzene rings in [6]helicene skeleton are replaced by cyclopentadiene rings was accomplished in five steps. Such molecules have helical structure similar to helicenes, however, lower racemization barrier. Appropriately modified aza-analogues **III**, **IV** could be suitable catalysts for asymmetric reactions. Therefore, our synthetic approach leading to these compounds will be discussed.



We appreciate the financial support from the Grant Agency of the Czech Republic (Grant No. P207/10/1124) and the Technology Agency of the Czech Republic (Grant No. TA01010646).

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