Revised Synthesis and Derivatisation of 2-Bromo[6]helicene.

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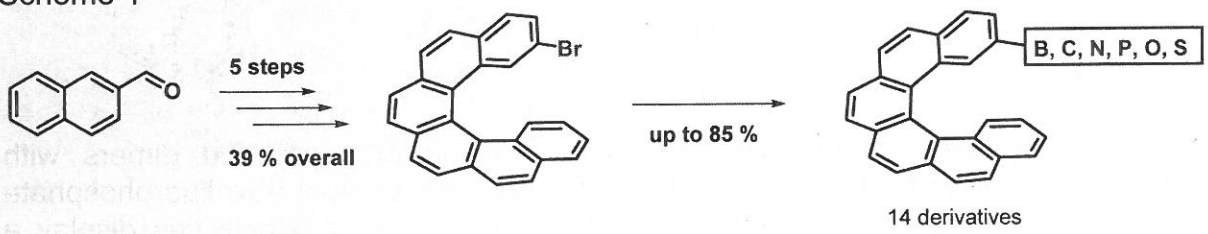
2-Bromo[6]helicene[1] represents a desirable starting material for preparation of a variety of different derivatives bearing helicene-2-yl moiety. We developed a revised, shorter and more efficient synthesis.

We also present robust procedures for preparation of several derivatives, which include products of carbon – carbon coupling reactions, such as Suzuki-Miyaura reaction, Heck reaction or Rosemund-von Braun reaction. Other heteroatoms, such as boron, nitrogen, oxygen, sulphur and phosphorus were also introduced into the structure with moderate to good yields. Most of the reactions were performed in a microwave reactor, keeping the reaction time to a necessary minimum. In general, this methodology enables the introduction of various functional groups and allows for the utilization of helicenes in various fields of research, namely material chemistry, supramolecular chemistry, or optoelectronics[2].

Scheme 1



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1 Lightner, D. A.; et. al. *J. Am. Chem. Soc.* **1972**, 94 (10), 3492.
2 Gingras, M. *Chem. Soc. Rev.* **2013**, 42, 1051.