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## **Synthesis of Carbo- and Heterohelicenes by Photocyclisation for Exploitation in Chiral Separation Techniques**

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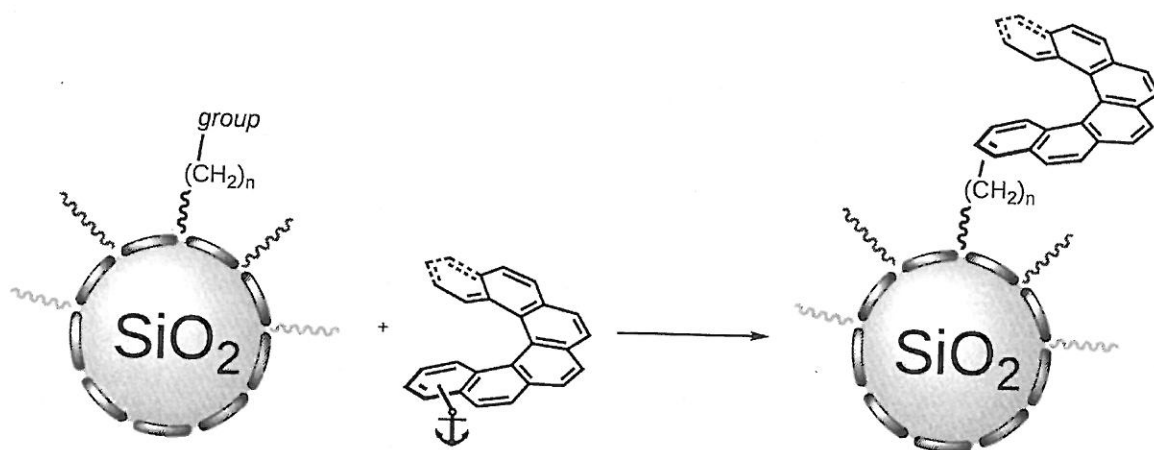
# Synthesis of carbo- and heterohelicenes by photocyclisation for exploitation in chiral separation techniques

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Helicenes are inherently chiral *o*-condensed polyaromatic compounds with various potential applications such as chiral selectors in separatory techniques. Recently, we have developed multigram-scale synthesis of various helicenes<sup>1</sup> based on photocyclisation, some of them purposely derivatized<sup>2</sup> for *anchoring* on proper materials via covalent bond. There are commercially available spherical stationary phases of defined mesh, possibly surface and pores are modified by appropriate reactive *alkyl-group* chains that commonly undergo further *group* modifications. In the first phase we are running trials potentially leading to stationary phases modified with racemic helicenes. After optimization of proper techniques and processes, the following step will be production of stationary phases modified with enantiometrically pure helicenes and their testing for utilization in chiral HPLC.



### References

1. Storch J., Círka V., Bernard M., Vokál J.: Method for Production of [6]Helicenes. Pat. No. PV 2012 – 245. Applied: 12.04.11.
2. Žádný J., Velíšek P., Jakubec M., Sýkora J., Círka V. and Storch J.: Exploration of 9-bromo[7]helicene reactivity. *Tetrahedron* 2013, in press