



národní  
úložiště  
šedé  
literatury

## **Preparation of New Helically Chiral Flavins as Possible Photocatalysts.**

Jakubec, Martin  
2016

Dostupný z <http://www.nusl.cz/ntk/nusl-253588>

Dílo je chráněno podle autorského zákona č. 121/2000 Sb.

Tento dokument byl stažen z Národního úložiště šedé literatury (NUŠL).

Datum stažení: 02.05.2024

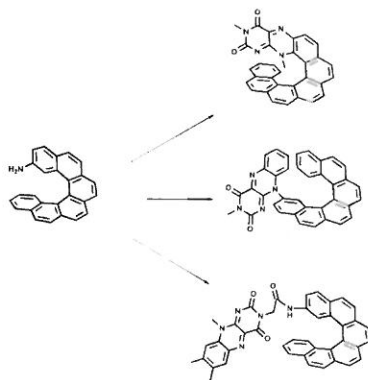
Další dokumenty můžete najít prostřednictvím vyhledávacího rozhraní [nusl.cz](http://www.nusl.cz) .

## Preparation of New Helically Chiral Flavins as Possible Photocatalysts

*Student: Ing. Martin Jakubec*  
*Supervisor: Ing. Jan Storch, Ph. D.*  
*Supervising Expert: Doc. Ing. Jan Vacek, Ph D.*

Flavins are well known photoactive compounds, which were previously employed as catalysts and photocatalysts in various types of reactions, *i.e.* oxidations<sup>1</sup> or [2+2] photocycloadditions<sup>2</sup>. Introduction of a chiral selector might induce enantioselectivity in reactions of suitable prochiral substrates. In this case, helicenes are used not only as chiral selectors, but also for their interesting optical properties.

The main goal of this work was to explore synthetic pathways leading to preparation of new helically chiral flavohelicenes (scheme 1). Several different structures with both flavin and helicene moiety can be prepared using 2-amino[6]helicene as a precursor. Some photo- and electrochemical properties were measured to determine the applicability of these compounds.



**Scheme 1:** Potential helicene-based flavins.



#### *References*

1. König, B.; Kümmel, S.; Cibulka, R. Flavin photocatalysis. In *Chemical Photocatalysis*, 1st ed.; König, B., Ed.; De Gruyter: Berlin/Boston, 2013; pp 45–66.
2. Mojr, V.; Svobodova, E.; Strakova, K.; Nevesely, T.; Chudoba, J.; Dvorakova, H.; Cibulka, R. *Chem. Commun.* **2015**, 51 (60), 12036–12039.

