



národní
úložiště
šedé
literatury

Helical Phospines and Their Transition-Metal Complexes.

Beránek, Tomáš
2015

Dostupný z <http://www.nusl.cz/ntk/nusl-373437>

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

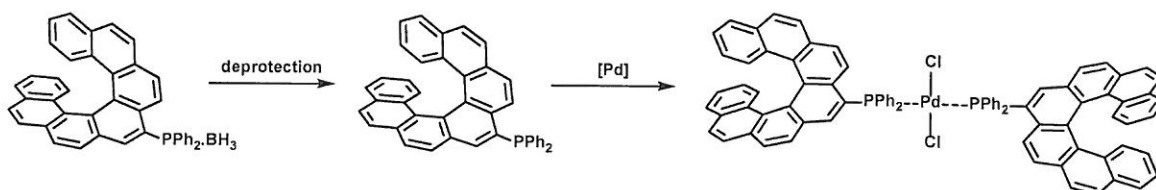
Další dokumenty můžete najít prostřednictvím vyhledávacího rozhraní [nusl.cz](http://www.nusl.cz) .

Helical phosphines and their transition-metal complexes

Tomáš Beránek, Jaroslav Žádný*, Tomáš Strašák, Jan Sýkora, Vladimír Církva, Jan Storch

Institute of Chemical Process Fundamentals of the AS CR, v.v.i., Prague, Czech Republic

Helicenes, non-planar, screw-shape hydrocarbons, represent molecules with unique optical and electronic properties. Owing to them they can be applied in many fields of research [1]. Surprisingly, coordination chemistry of helicenes and their use as chirality inductors is still strongly under-developed. Among privileged ligands exhibiting central, axial or planar chirality, use of helically chiral ligands in transition metal catalysis is still very rare. Here in we are focusing on helical phosphines potentially applicable in homogeneous asymmetric catalysis. Based on previous results [2], methodology for preparation of transition metal complexes bearing helical phosphine ligands in their racemic form was developed (Scheme 1).



Scheme 1. Prepared palladium complex was successfully used in a model Suzuki-type reaction. Synthesis of other helical phosphines in their non-racemic form is in progress in our lab.

References

- [1] Gingras, M. *Chem. Soc. Rev.* **2013**, 42, 1051.
[2] Žádný, J.; Velíšek, P.; Jakubec, M.; Sýkora, J.; Církva, V.; Storch, J. *Tetrahedron* **2013**, 69, 6213.

This work was supported by the Technology Agency of the Czech Republic (TA04010082).