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2016

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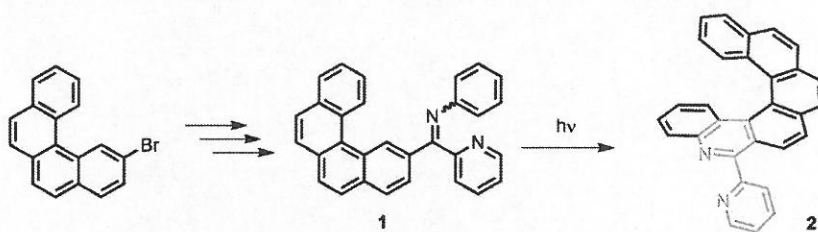
Datum stažení: 27.04.2024

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Photochemical Synthesis of Novel Bidentate Aromatic Ligands

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Transition metal complexes bearing 2,2'-bipyridine ligands are widely utilized in many fields of research, particularly in photocatalysis [1] or as chromophors in dye-sensitized solar cells [2]. This work is focused on the synthesis of such ligands containing extended polyaromatic systems, mainly pyridyl-aza[n]helicenes and pyridyl-aza[n]phenacenes. The synthetic strategy is illustrated on preparation of 6-pyridyl-5-aza[6]helicene (**2**) (scheme 1). The imino specie **1** readily undergoes a photocyclization reaction in presence of Lewis acid to furnish the corresponding aza[6]helicene **2**. In this manner various aza[n]helicenes and aza[n]phenacenes were prepared. Synthesis of corresponding Ru(II) complexes is in progress in our laboratory.



Scheme 1

References

1. Teplý F. *Collect. Czech. Chem. Commun.* **2011**, 76, 859.
2. Grätzel M., et al. *J. Am. Chem. Soc.* **1985**, 107, 2988.