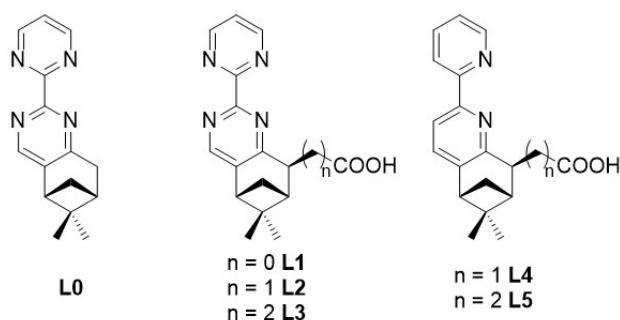


Enantiopure ligands and their luminescent lanthanide complexesA. B. Solea^{1,3}, L. Yang², C. Allemann¹, K. M. Fromm³, O. Mamula Steiner^{1*}¹University of Applied Sciences of Western Switzerland, HEIA-FR, ²Henan University of Technology, ³University of Fribourg

One of the possible ways for predetermining the stereochemistry of a metal centre is through diastereoselective synthesis: the chiral information is transferred from the chiral ligand to the metal ion, enabling the preferential formation of one stereoisomer. Ligands containing a chiral pinene moiety are one type of such molecules and they have been used extensively to control the configuration in complexes of transition metals.[1] If a carboxylic unit is also attached to this backbone these ligands form complexes with interesting luminescent and supramolecular features when reacted with lanthanide(III) ions.[2]

We have synthesized and fully characterized a series of chiral ligands with a bipyrimidine (**L0-L3**) or bipyridine backbone (**L4, L5**). These ligands were further employed in complexations with Eu(III) and Tb(III) ions. The characterization of the obtained complexes will be presented herein.



[1] Olimpia Mamula, Alex von Zelewsky *Coord. Chem. Rev.* **2003**, 242, 87-95.

[2] Olimpia Mamula, Marco Lama, Helen Stoeckli-Evans, Sergiu Shova *Angew. Chem. Int. Ed.* **2006**, 45, 4940-4944.