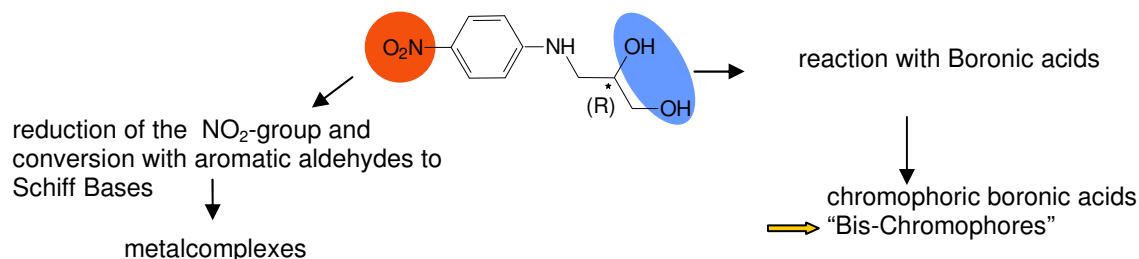
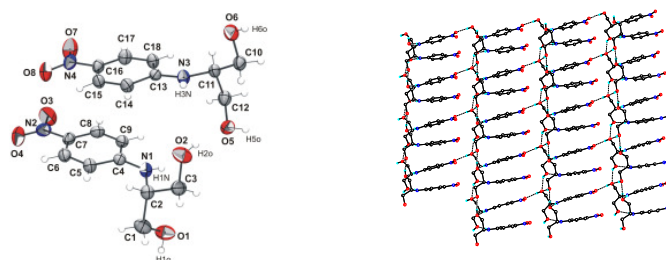


## Chiral Chromophores with 1,2-resp.1,3-Diolfunctionalities as Building Blocks for Coupled Structures

The main goal of this work is the synthesis and characterisation of chiral chromophores with diolfunctionalities as possible building blocks for coupled structures, i.e.g. 3-[(4-nitrophenyl)amino]-propane-1,2-diol [1,2].

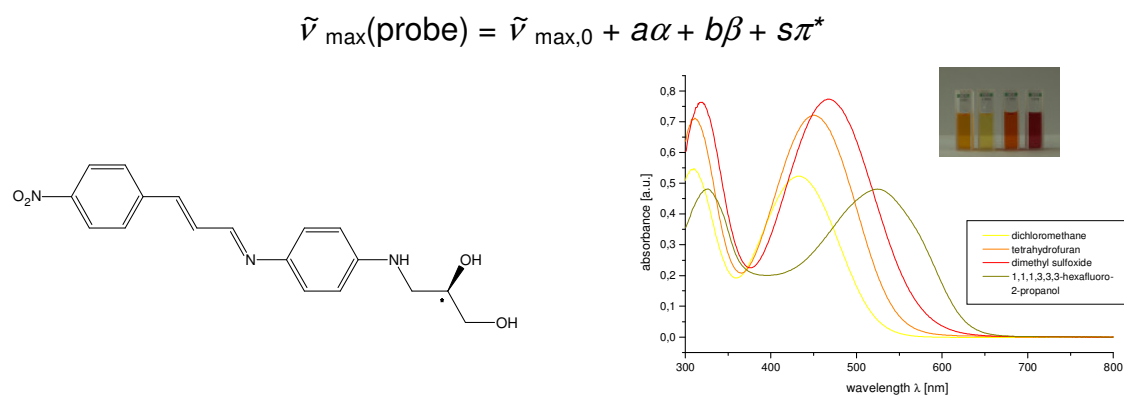


The molecules are able to build up manifold hydrogen bonds, these interaction were investigated by single crystal X-ray analysis.



**Figure 1:** X-ray structure analysis of 2-[(4-nitrophenyl)amino]-propane-1,3-diol.

The influence of the HBD (hydrogen-bonding acidity), HBA (hydrogen-bonding basicity) and dipolarity/polarizability of the environment (i.e. solvent) on the UV/vis spectroscopic characteristics (i.e. solvatochromic shift) were investigated using the Kamlet–Taft LSER (linear solvation energy relationship).



**Figure 2:** UV-vis absorption spectra of the Schiff Base in four different solvents and a photo, from left to right: tetrahydrofuran, dichloromethane, dimethyl sulfoxide and 1,1,1,3,3,3-hexafluoro-2-propanol [2]

[1] Spange, S.; Hofmann, K.; Walfort, B.; Ruffer, T.; Lang, H. *J. Org. Chem.* **2005**, *70*, 8564–8567.

[2] Spange, S.; Schreiter, K.; Hofmann, K. *Synthesis* **2006**, *13*, 2100–2102.