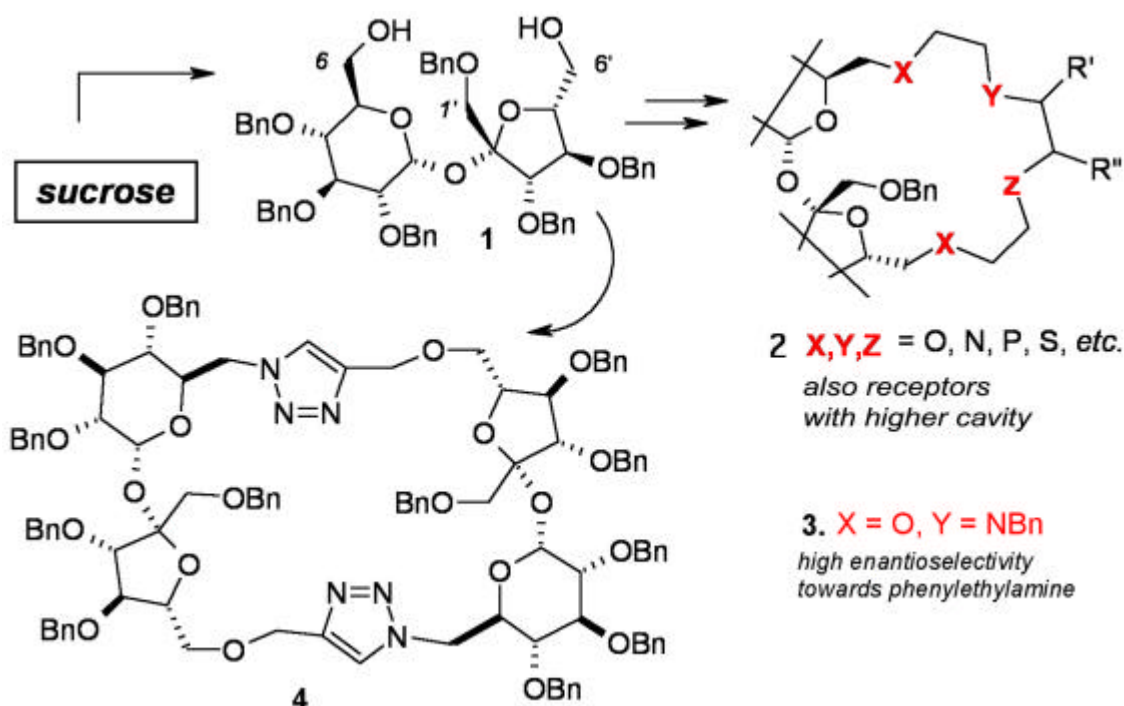


WHAT CAN BE DONE FROM SUCROSE? TOWARDS MACROCYCLIC RECEPTORS WITH SUCROSE SCAFFOLD

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Sucrose, a cheap raw material, is available in more than 140 million tons per year; most of it is consumed on the food market. This chemical is very demanding to work with, because of its very poor solubility in most organic solvents, the presence of eight hydroxyl groups which are difficult to differentiate, and high sensitivity of the glycosidic bond in acidic media. However, this disaccharide is also a subject of interest as a starting material for the preparation of fine chemicals, as well as bio-degradable polymers or surfactants.¹ We have elaborated a convenient route to hexa-O-benzylsucrose (**1**) which served as starting material for the preparation of macrocyclic receptors of type **2**. One of them (**3**) showed remarkable high enantioselectivity towards chiral amines.



Approach to receptors with higher symmetry (such as e.g. **4**) will be also presented²

¹ Recent review: Queneau, Y., Jarosz, S., Lewandowski, B., Fitremann, J. *Adv. Carbohydr. Chem. Biochem.*, **2007**, 61, 217-300.

² Jarosz, S., Lewandowski, B., *Synthesis* **2008**, 913-916; Jarosz, S., Lewandowski, B., *Carbohydr. Res.* **2008**, 343, 965-969.