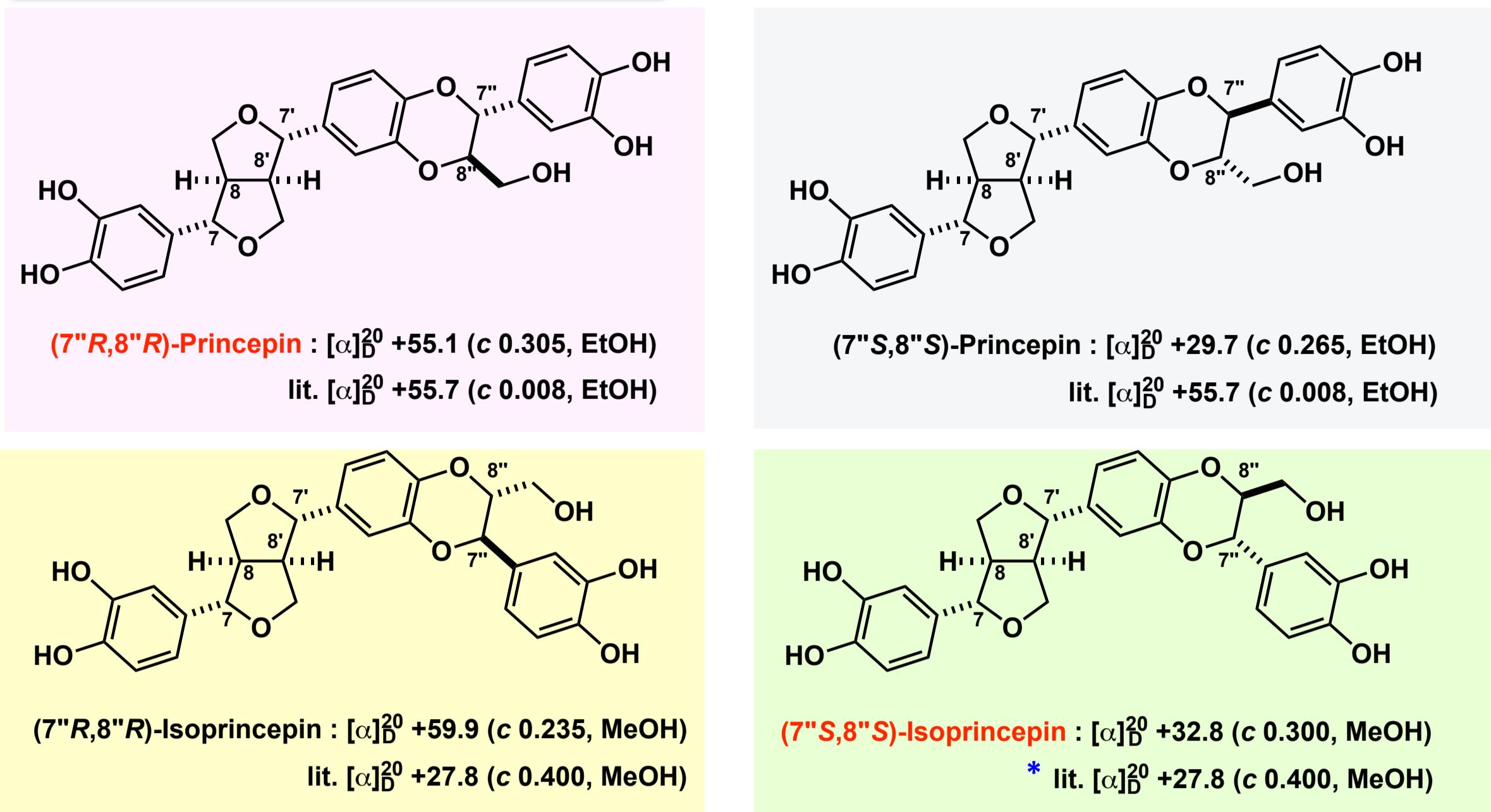




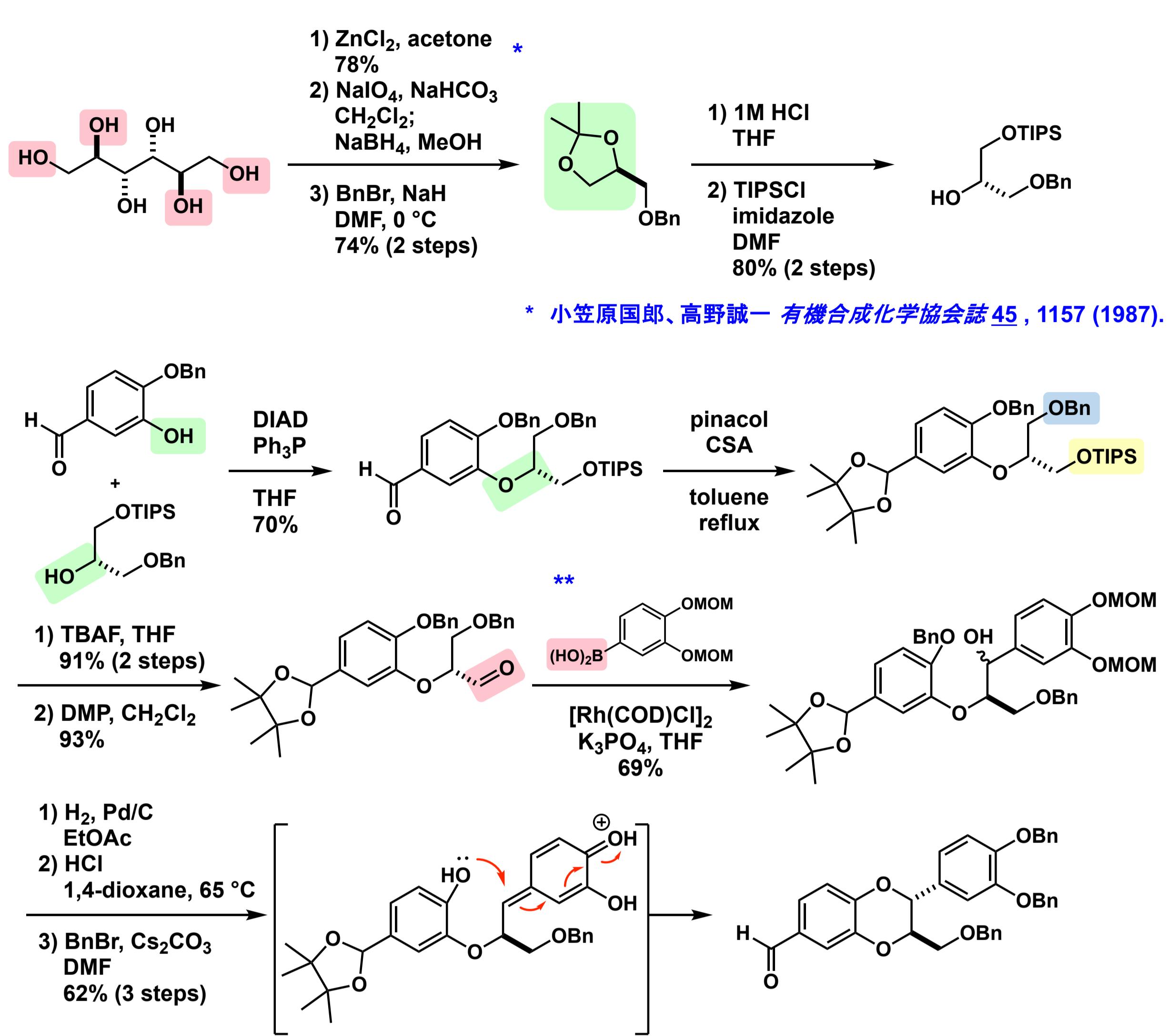
## Structure of Princepin



Bioactivity:  
Antiestrogenic Activity  
Antioxidant Activity  
Natural Source:  
Seeds of *Joannesia princeps*  
Isolation:  
R. Waibel et al.  
*Phytochemistry* 62, 805 (2003).

\* T. Suzuki et al. *J. Wood. Sci.* 62, 339 (2016).

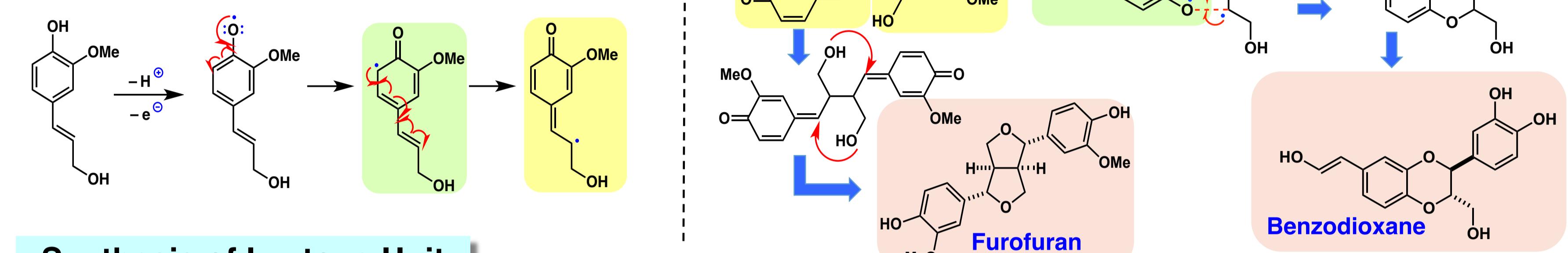
## Synthesis of Benzodioxane Unit



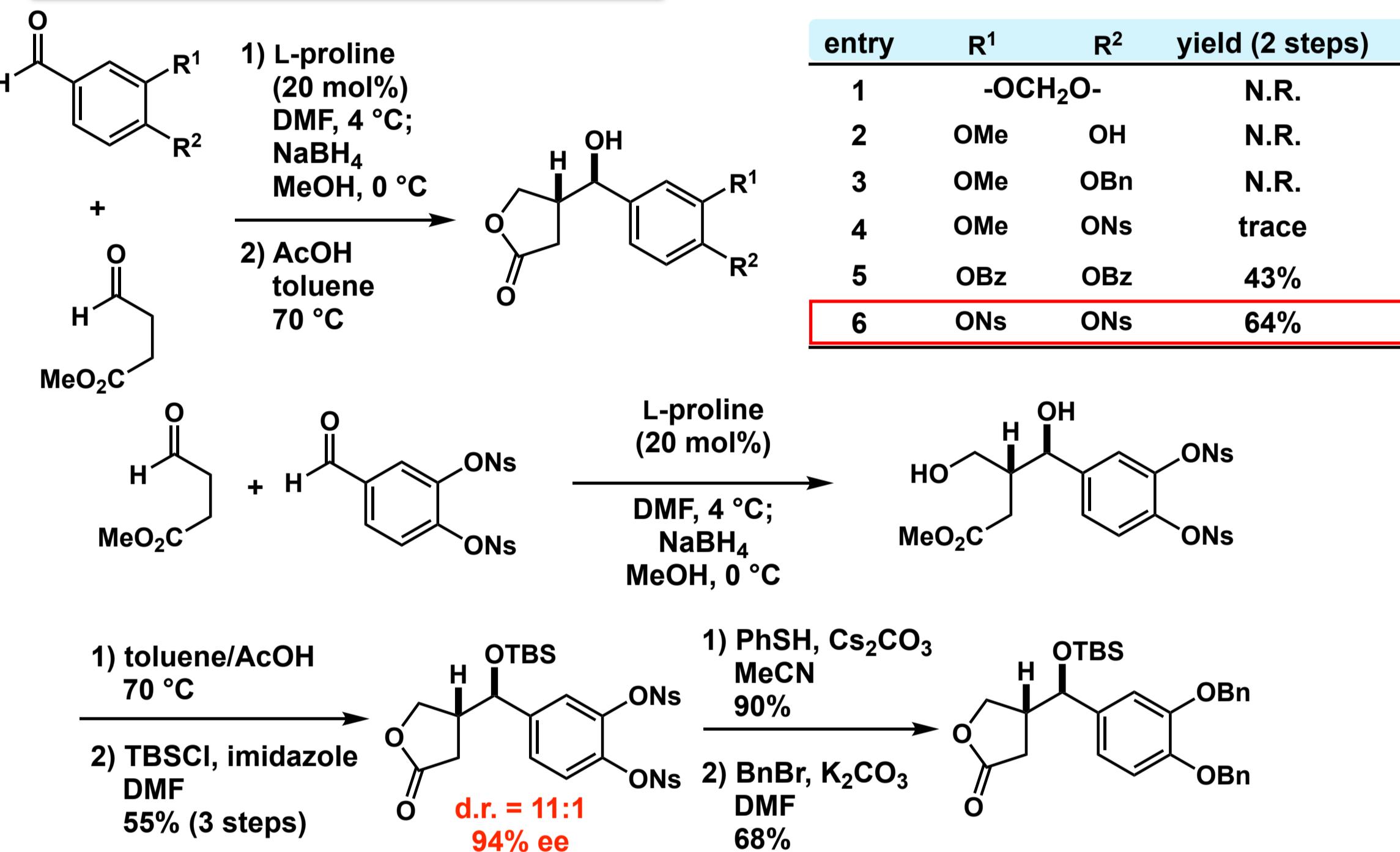
\*\* N. Miyaura et al. *Angew. Chem. Int. Ed.* 37, 3279 (1998).

## Biosynthetic pathway of polyphenol lignans

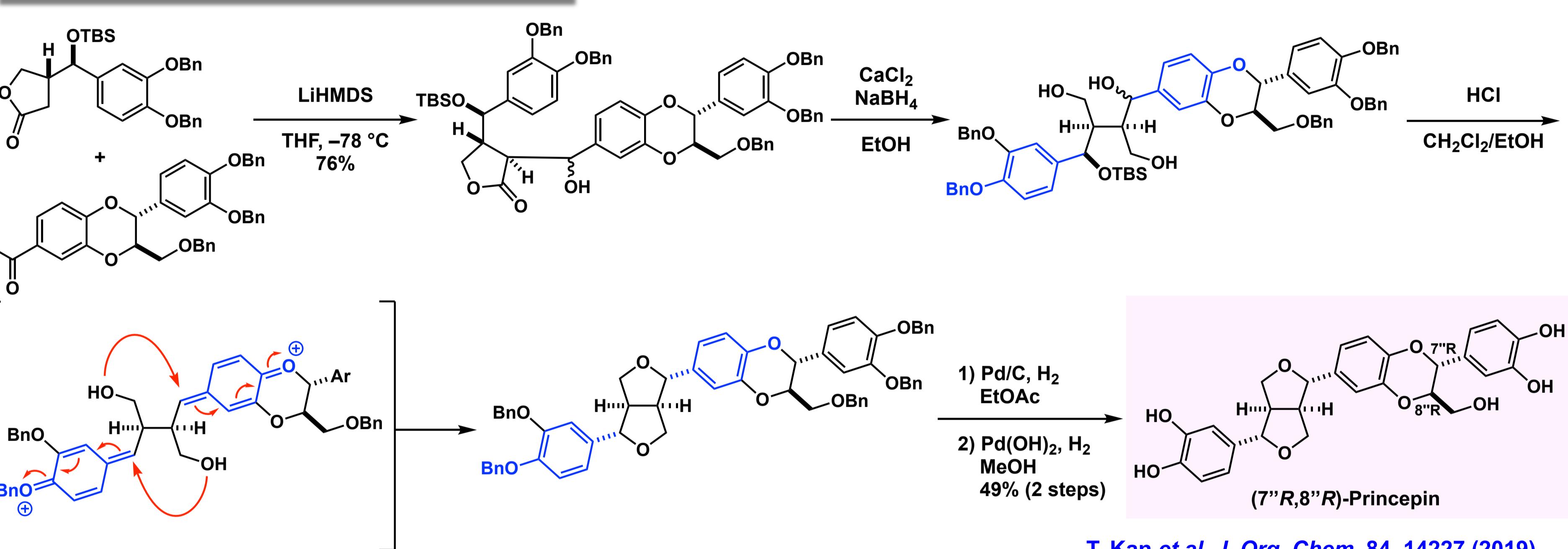
## Oxidation of Phenylpropanoid



## Synthesis of Lactone Unit

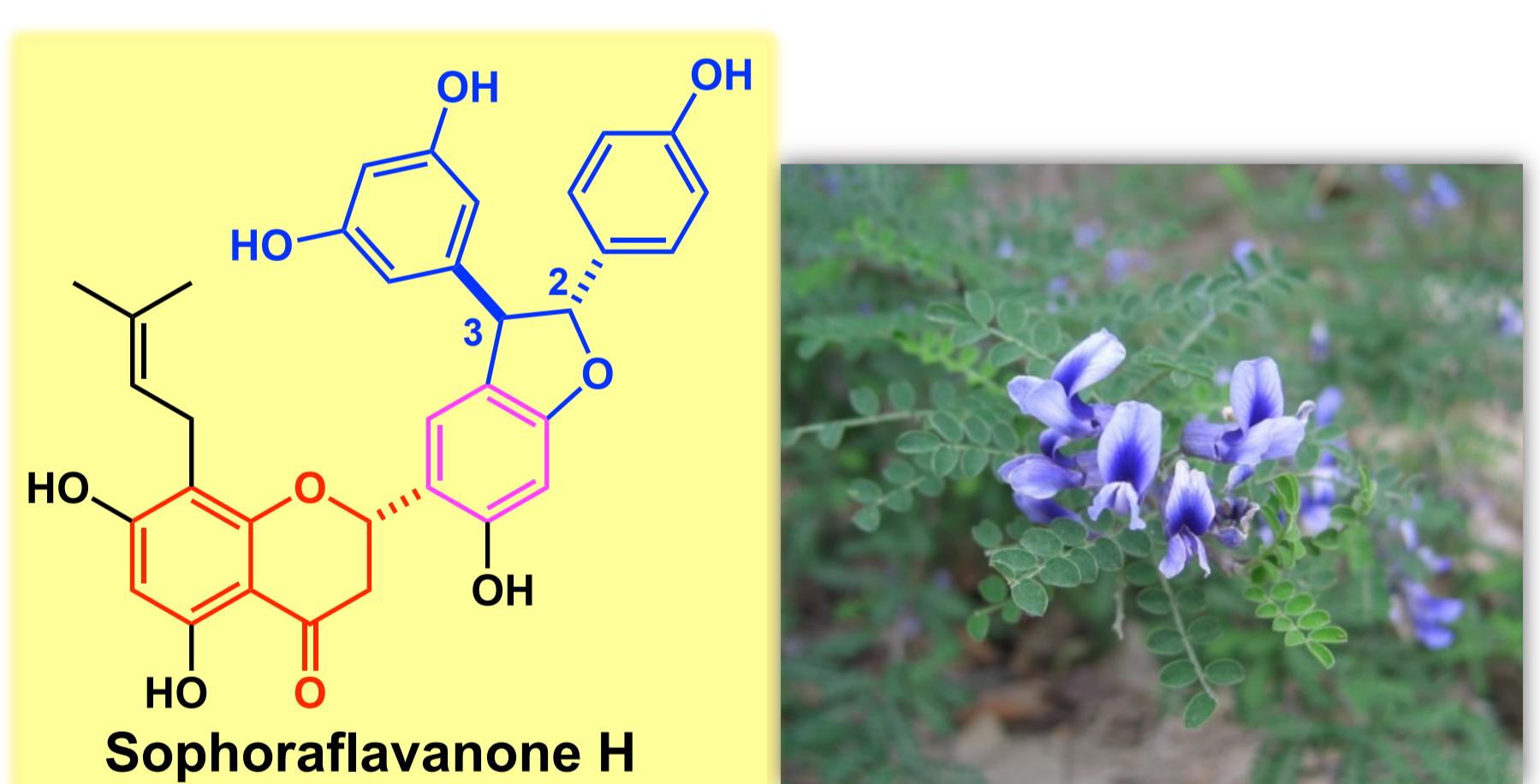


## Construction of Eurofuran Structure



T. Kan et al. *J. Org. Chem.* 84, 14227 (2019).

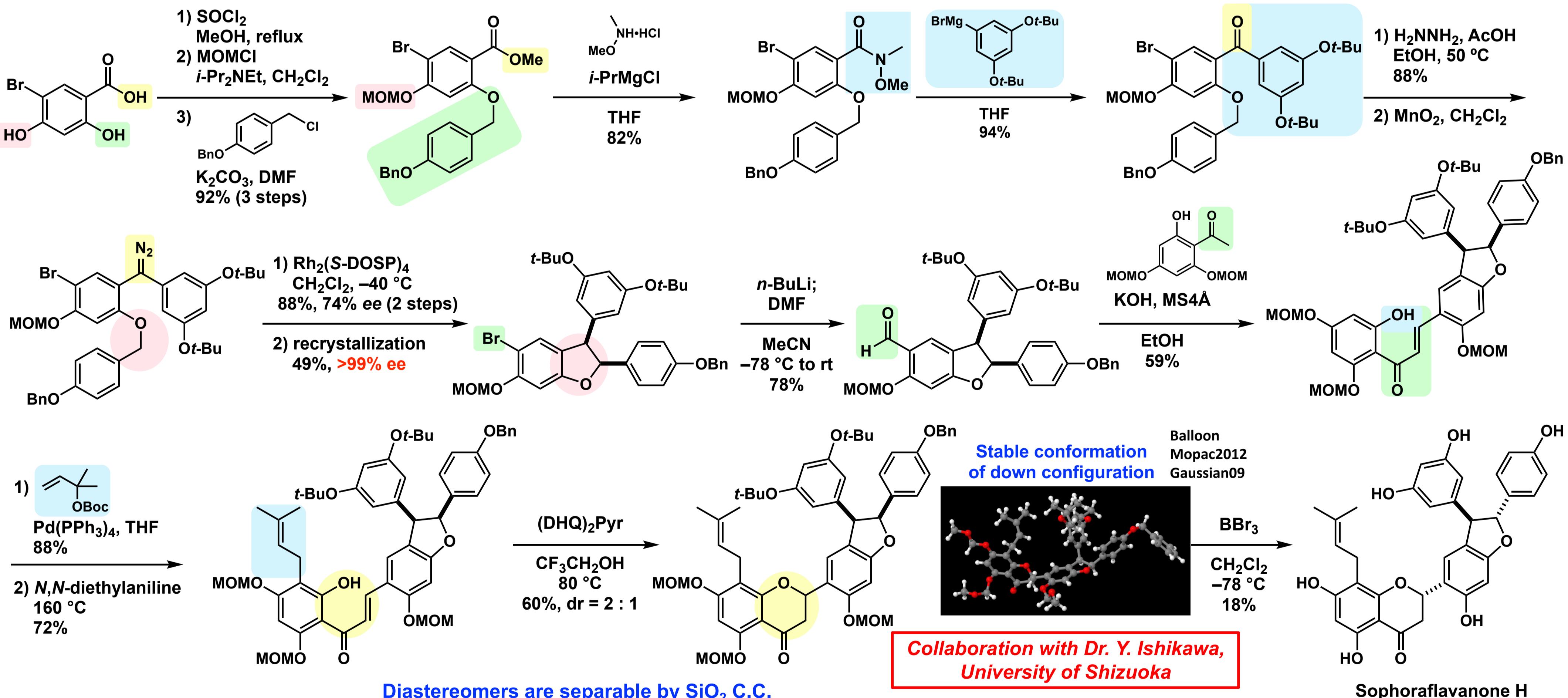
## Structure of Sophoraflavanone H



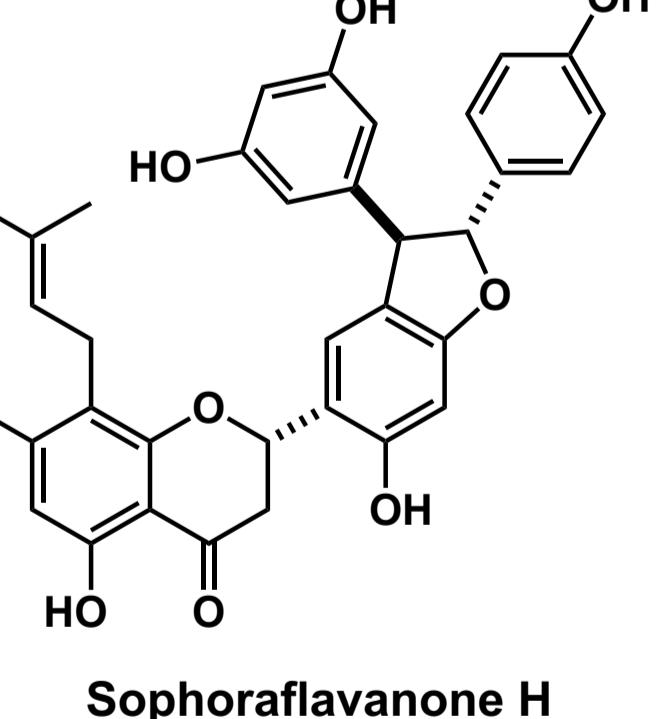
Natural Source : *Sophora moorcroftiana*  
Y. Shirataki et al. *Chem. Pharm. Bull.* 36, 1568 (1991)

Bioactivity : Anti Microbial, Anti Tumor Activity  
Y. Shirataki et al. *Anticancer Res.* 21, 275 (2001)

## Total Synthesis of Sophoraflavanone H

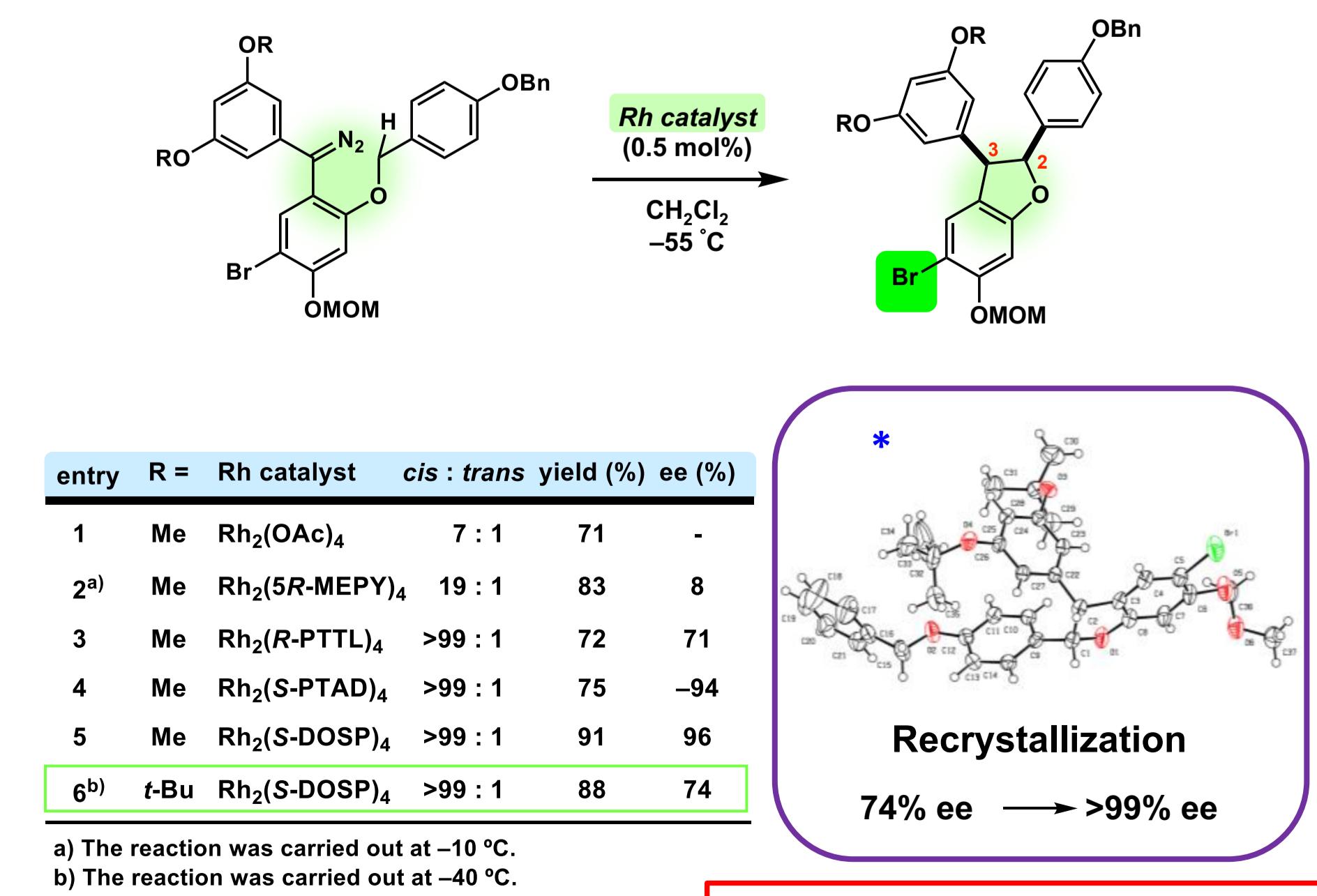


Collaboration with Dr. Y. Ishikawa,  
University of Shizuoka



Sophoraflavanone H

## Construction of 2,3-Diaryldihydrobenzofuran



a) The reaction was carried out at -10 °C.

b) The reaction was carried out at -40 °C.

## Determination of Absolute Configuration by Comparison Between Obs. and Calcd. CD Spectra

