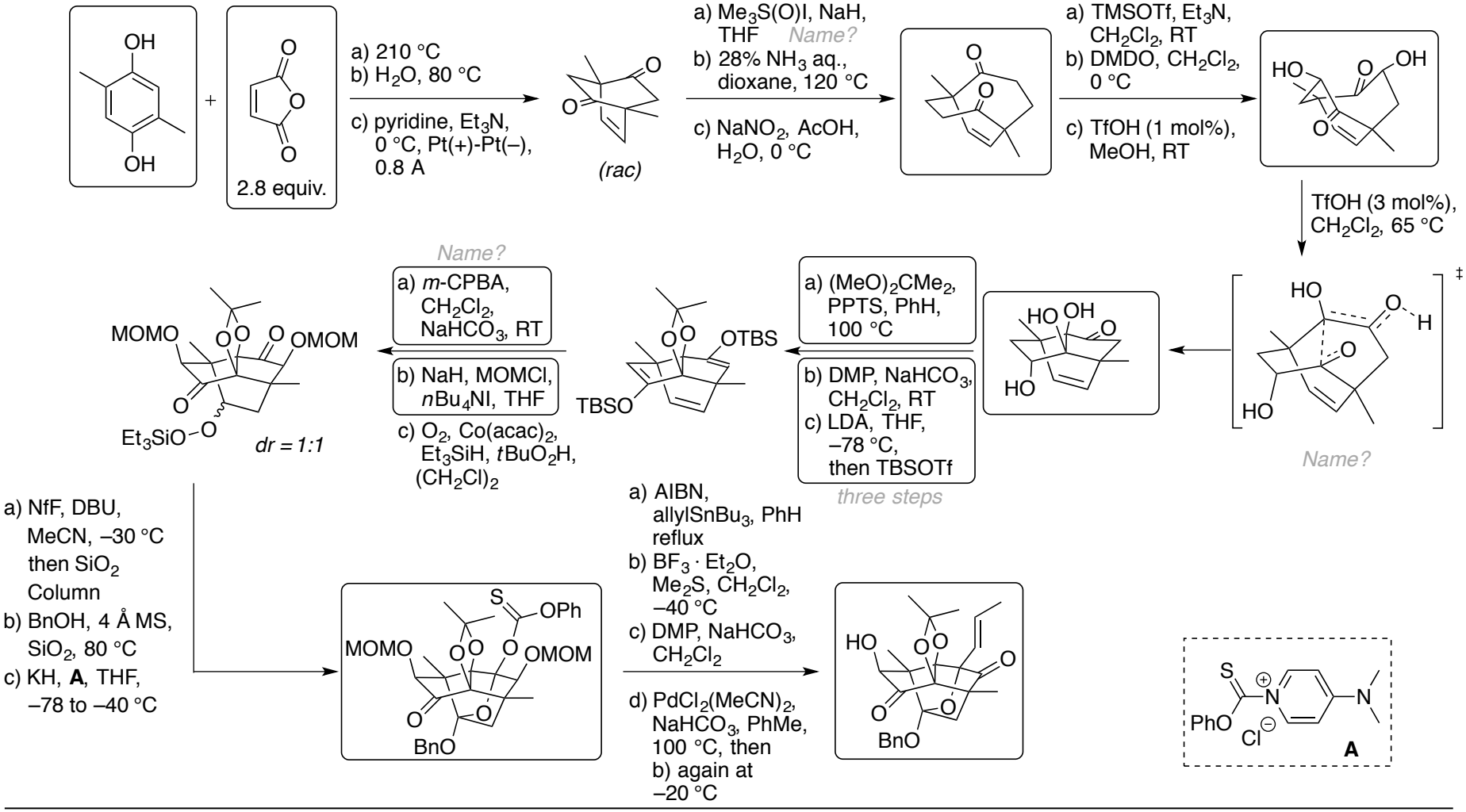
E2: Total Synthesis of (±)-Ryanodol [1-3]



[1] M. Nagatomo, M. Koshimizu, K. Masuda, T. Tabuchi, D. Urabe, M. Inoue, *J. Am. Chem. Soc.* **2014**, *136*, 5916.

[2] K. Hagiwara, M. Himuro, M. Hirama, M. Inoue, *Tet. Lett.* **2009**, *50*, 1035.

[3] D. Urabe, M. Nagatomo, K. Hagiwara, K. Masuda, M. Inoue, *Chem. Sci.* **2013**, *4*, 1615.

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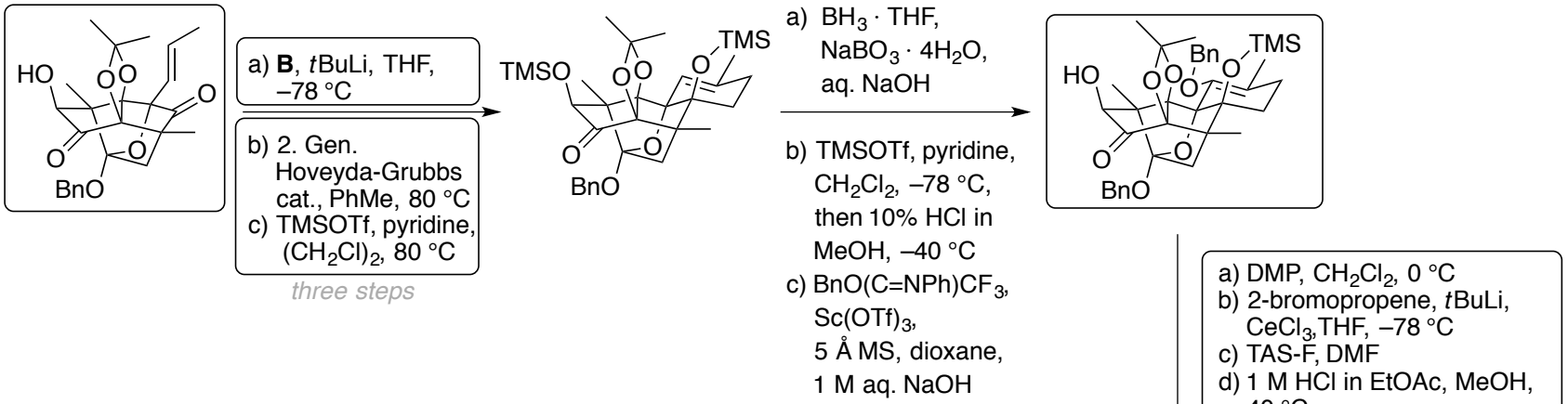
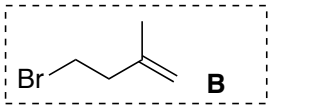
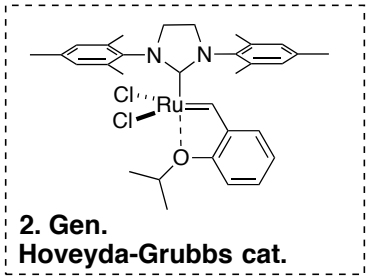
E2: Total Synthesis of (±)-Ryanodol [1-3]







- Ryanodol was found in the South American plant *Ryania Speciosa* as its 1H-pyrrole-2-carboxylate ester (at 3-OH), which is known as ryanodine
- Ryanodine alters the function of a high-conductance intracellular calcium-channel. Since only a few molecules have been reported to act on this receptor, derivatives of ryanodine are important for the biological investigation towards potential therapeutic agents against skeletal and cardiac diseases
- Previous total syntheses of ryanodol were described by Wiesner and Deslongchamps in the 1950's and 1970's, respectively

[1] M. Nagatomo, M. Koshimizu, K. Masuda, T. Tabuchi, D. Urabe, M. Inoue, *J. Am. Chem. Soc.* **2014**, *136*, 5916.
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