DOI: 10.1002/chin.201321169

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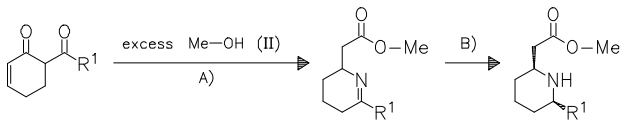
A Telescoped Route to 2,6-Disubstituted 2,3,4,5-Tetrahydropyridines and 2,6-syn-Disubstituted Piperidines: Total Synthesis of (—)-Grandisine G. — The value of this method is exemplified by the first total synthesis of (-)-grandisine G (XIII). — (CUTHBERTSON, J. D.; TAYLOR*, R. J. K.; Angew. Chem., Int. Ed. 52 (2013) 5, 1490-1493, http://dx.doi.org/10.1002/anie.201208118 ; Dep. Chem., Univ. York, Heslington, York YO10 5DD, UK; Eng.) — Roessler



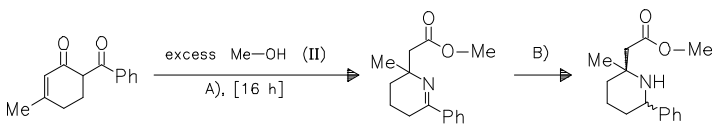
I — III — IV

a R^1: —Ph — a 97% (crude) — a (90% from I)

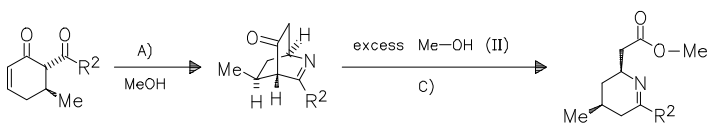
b R^1: — — b – — b (55% from I)

c R^1: —Cy — c 97% (crude) — c (92% from I)

A): 35% aq. NH_3, 0 –> 25°C B): H_2, 2.5 mol% Pt–C (cat.), MeOH, 25°C



V — VI 94% (crude) — VII (77% from V, 1:1 m.d.)



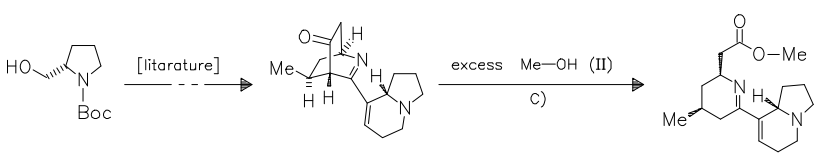
VIII — IX — X

a R^2: —Ph — a (86% from VIII)

b R^2: —Cy — b (93% from VIII)

c R^2: — — c (81% from VIII)

C): DBU, microwaves, 80°C



XI* — (–)–XII* — (–)–XIII* 63%

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