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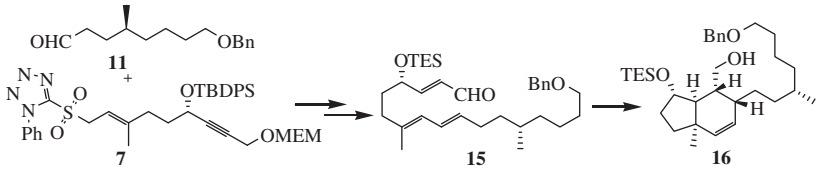
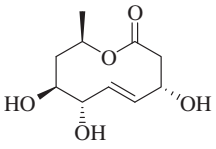
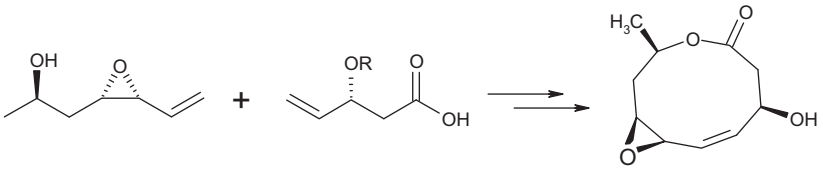
Contents



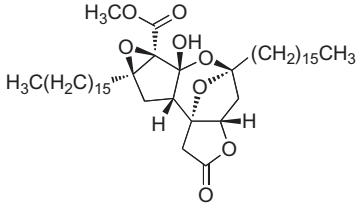


Decarestrictine O

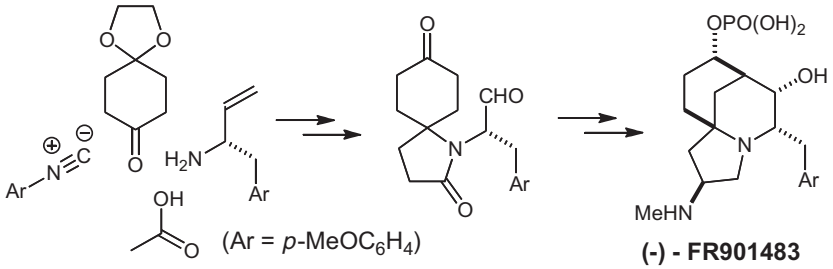
Total synthesis of decarestrictine O is reported.



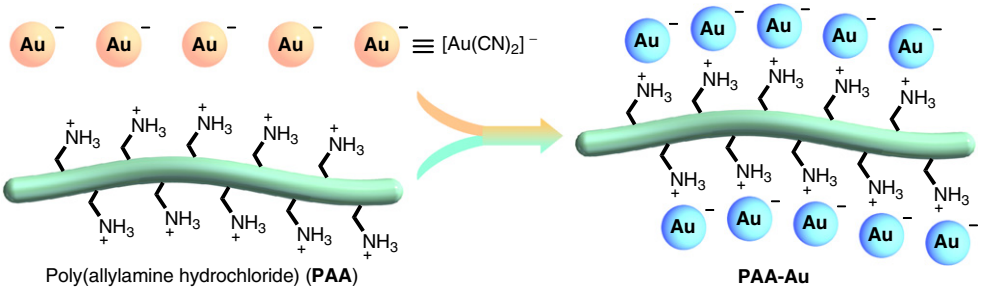
Botryolide B

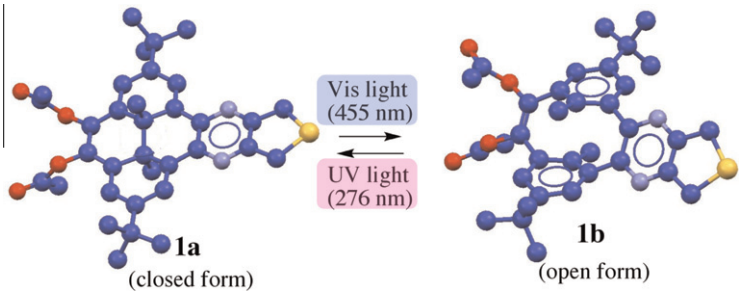


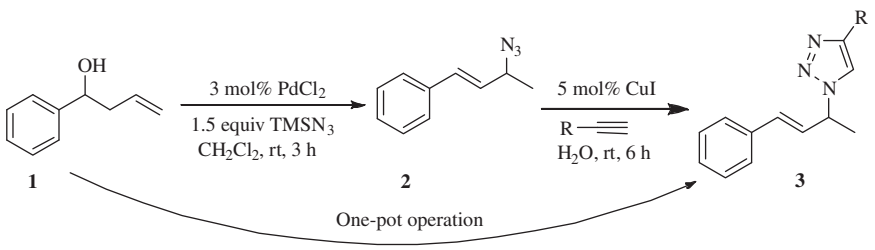
untenolide A

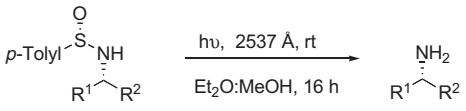


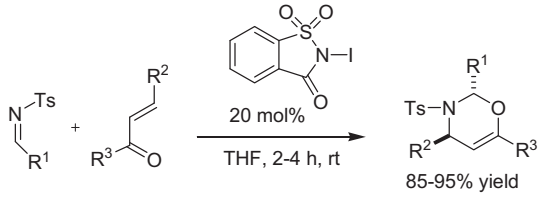
Efficient synthesis of the tricyclic key intermediate **2** for (−)-FR901483 **1** was accomplished using an intramolecular aldol reaction and an Ugi 4CC reaction.

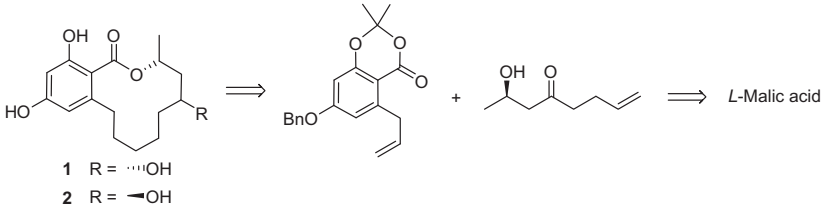




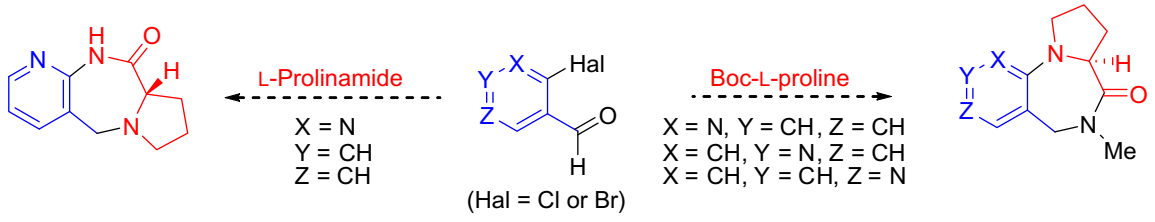


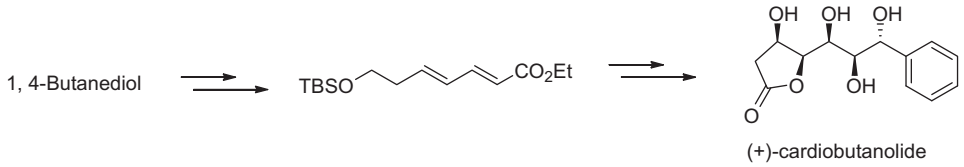


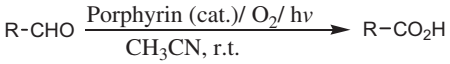


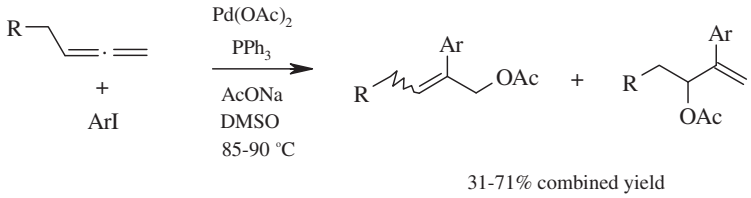


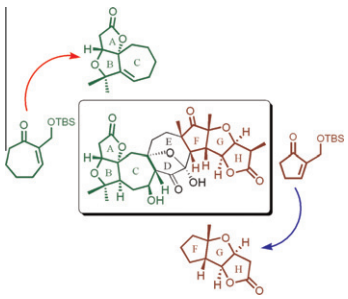
The first total synthesis of (3*R*),(5*R*)-5-hydroxy-de-*O*-methyllasiodiplodin and its epimer is reported from malic acid. The adopted approach is highly convergent and stereoselective. The strategy utilizes *syn* selective reduction and ring-closing metathesis as the key steps.

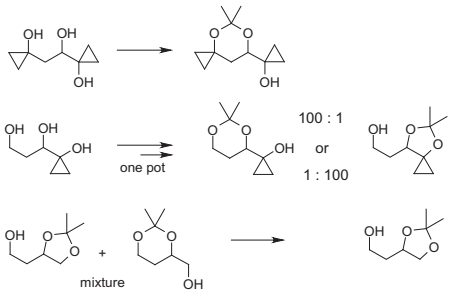


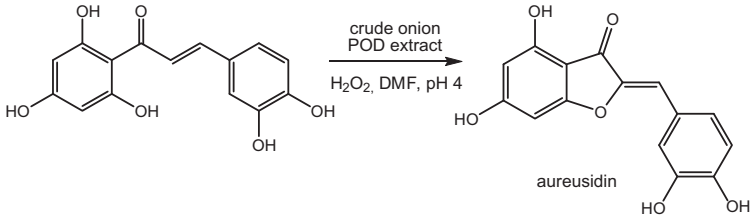




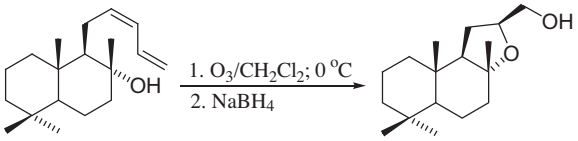


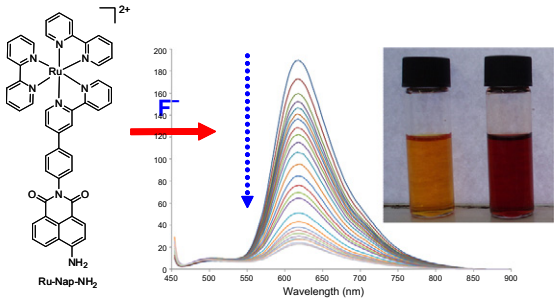


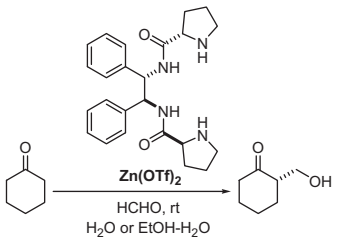




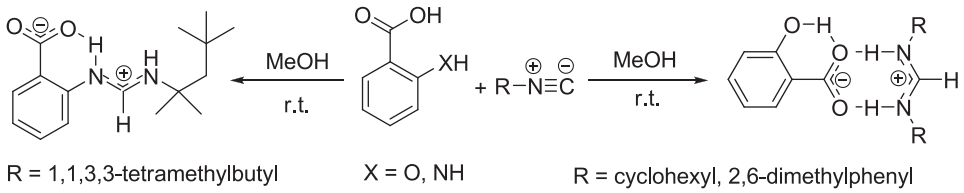
A crude peroxidase (POD) from onion solid waste acts efficiently as a biocatalyst and promotes the oxidative cyclization of 2′,3,4,4′,6′-pentahydroxy-chalcone (which is not a natural substrate of onion POD) into the natural aurone aureusidin.

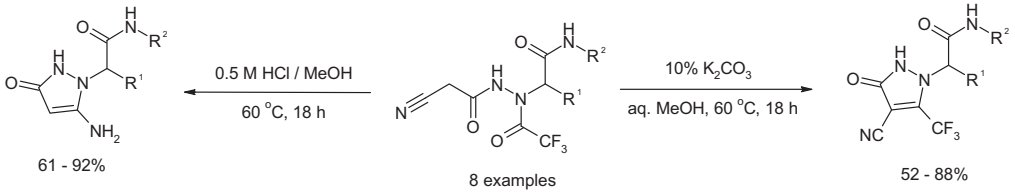


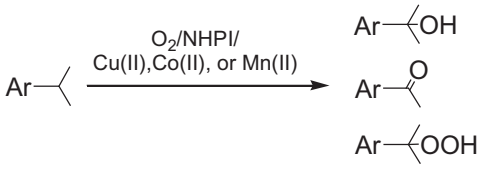


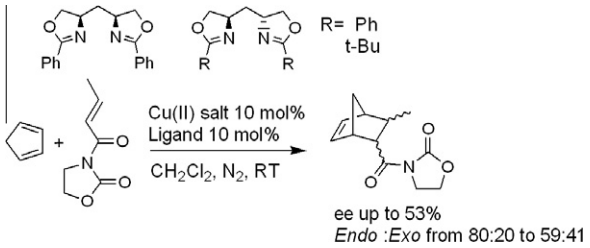


A chiral prolinamide-based zinc complex promotes the aldol reaction of ketones with aqueous formaldehyde, giving the corresponding adducts in good yields and high ees. The efficient direct aldol reaction of formaldehyde with ketones in homogeneous aqueous solution is presented for the first time.

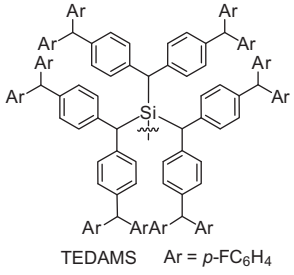


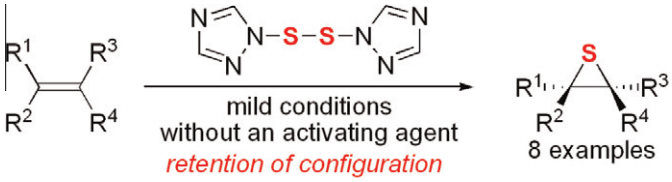


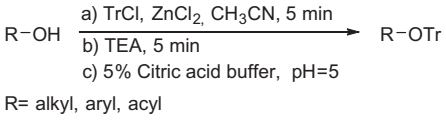




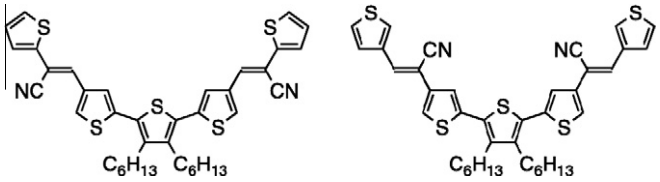
The synthesis of two new bisoxazoline (BOX) ligands is described. The copper(II) complex of one of the new ligands is structurally determined and the catalytic performance in the copper(II)-catalysed Diels–Alder reaction is reported.

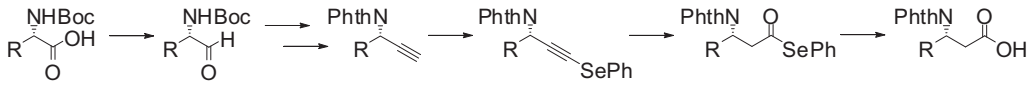




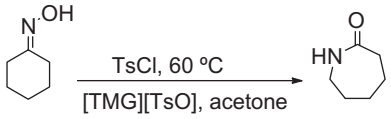


A new, mild, high rate and simple procedure for *O*-tritylation of less reactive hydroxyls in primary and secondary alcohols, phenols and carboxylic acids is described, based on the use of stoichiometric Friedel–Crafts catalysts. Results concerning the use of $ZnCl_2$ as assistant in acetonitrile are reported.

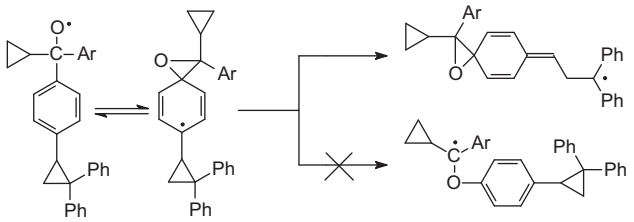


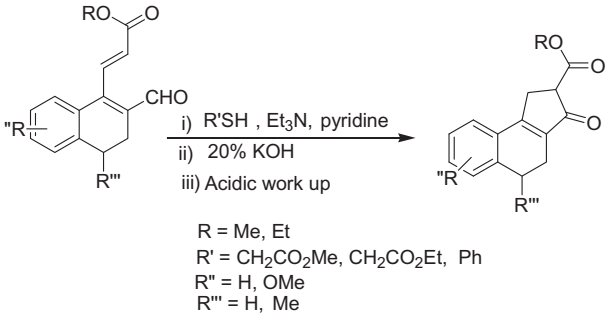


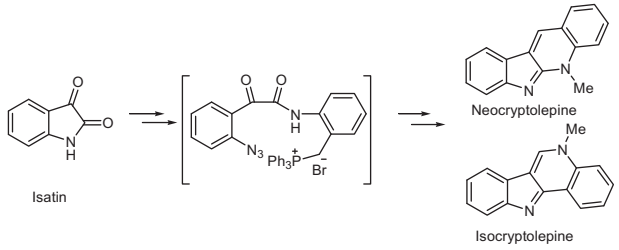
A selenium-mediated protocol for the homologation of *N*-Boc α-amino acids into the corresponding *N*-phthaloyl β-amino acids has been developed.



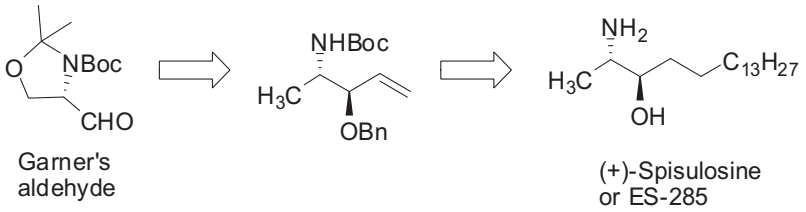
The Beckmann rearrangement of cyclohexanone oxime is carried out by treatment with TsCl using a new salt, [TMG][TsO], as the promoter. This procedure requires mild reaction conditions and affords excellent levels of conversion and selectivity to obtain pure ε-caprolactam in a high yield. The new salt is cheap, easy to prepare, not corrosive, and can be recovered and reused.



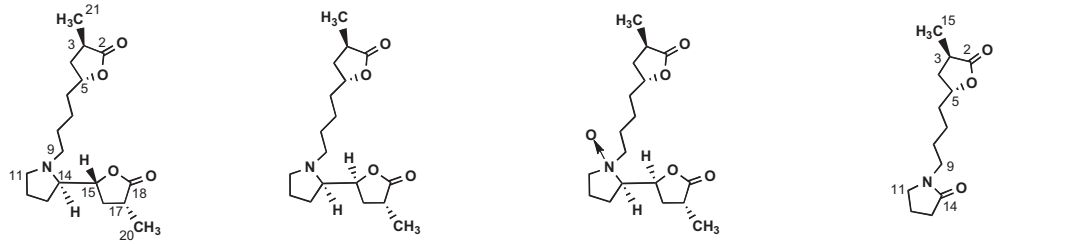


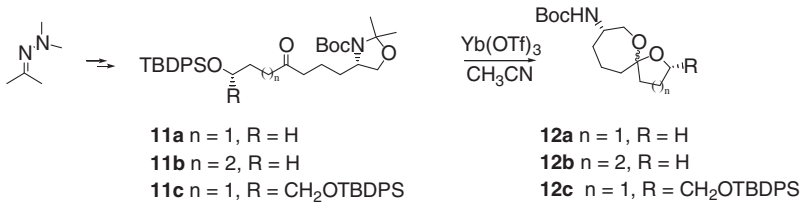


A formal synthesis of indolequinoline alkaloid neocryptolepine and isocryptolepine is described which employed a common intermediate and used an intramolecular Wittig reaction followed by regioselective methylation in excellent yield.



A new approach to the total synthesis of (+)-spisulosine (ES-285) from Garner's aldehyde by a highly diastereoselective Grignard reaction and olefin cross metathesis is described.

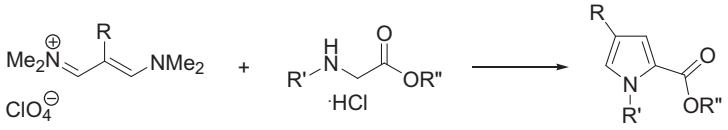




11a n = 1, R = H
11b n = 2, R = H
11c n = 1, R = $CH_2OTBDPS$

12a n = 1, R = H
12b n = 2, R = H
12c n = 1, R = $CH_2OTBDPS$

Ketones **11a**–**c** obtained from acetone *N*,*N*-dimethylhydrazone were quantitatively transformed under $Yb(OTf)_3$ treatment into 1,6-dioxaspiro[4.6]undecanes **12a**,**c** and 1,7-dioxaspiro[5.6]dodecanes **12b**.



R = H, CH_3, CH_2CH_3

R' = H, CH_3
R" = CH_3, CH_2CH_3

*Corresponding author
Supplementary data available via ScienceDirect

COVER

The cover figures show the structure, X-ray crystal structure, and crystal lattice structure of untenolide A, a new polyketide isolated from an Okinawan marine sponge *Plakortis* species.
Tetrahedron Letters, **2010**, 51, 4023–4026.

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