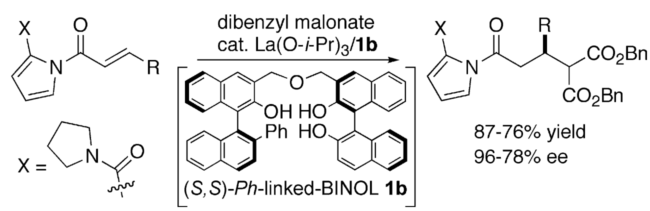
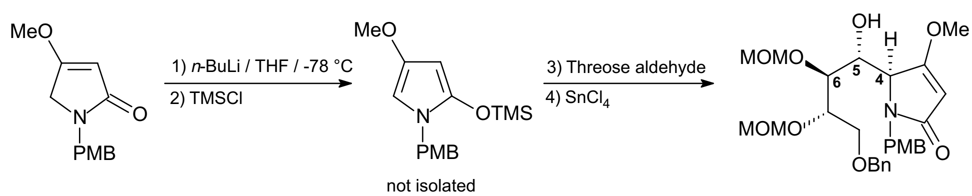
Tetrahedron Letters

Tetrahedron Letters Vol. 48, No. 16, 2007

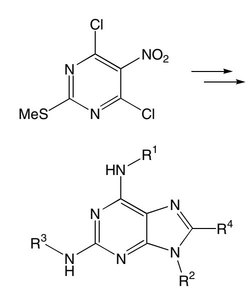
Contents

COMMUNICATIONS

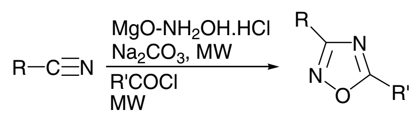


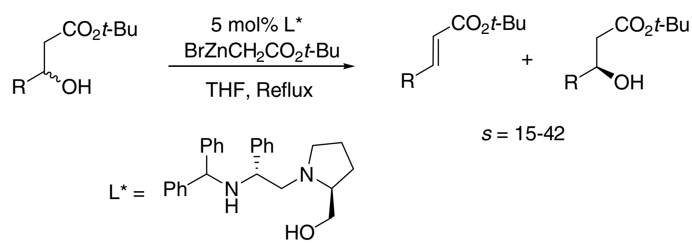


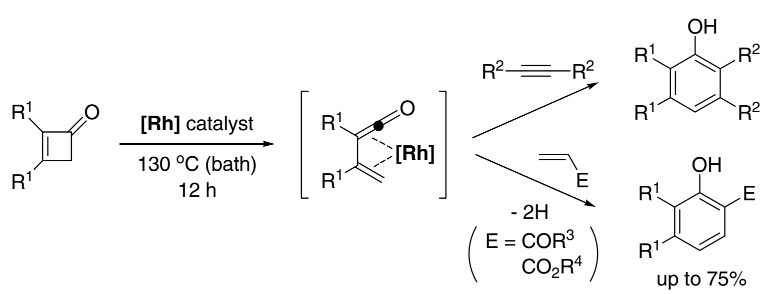
A fully regiocontrolled synthesis of a 2,6,8,9-tetrasubstituted purine library was performed through on-resin elaboration of 4,6-dichloro-2-(methylthio)-5-nitropyrimidine.

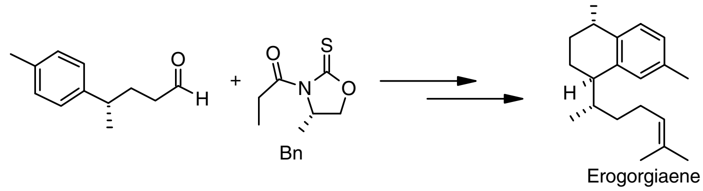


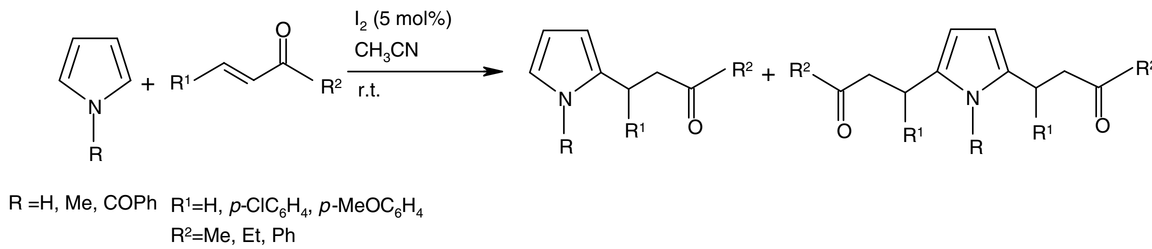
24 examples

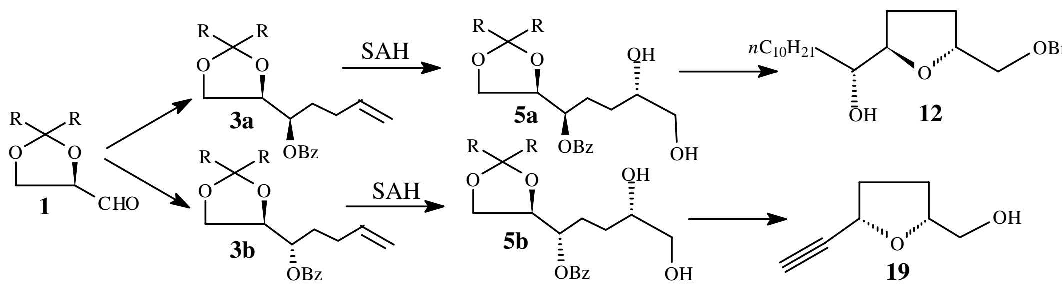

R—C≡N
MgO-NH2OH.HCl
Na2CO3, MW
R'COCl
MW
R
N
N
O
R'

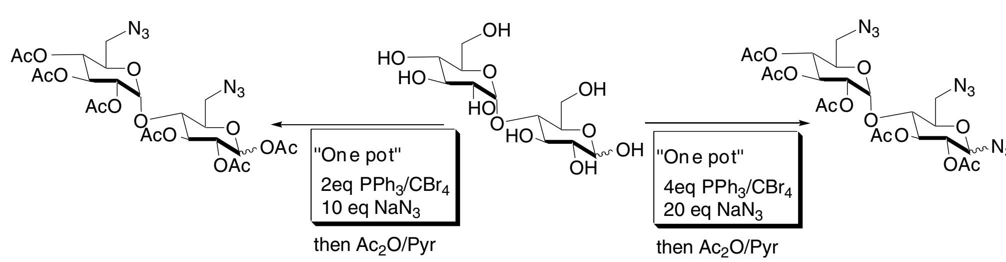

CO2t-Bu
R
OH
5 mol% L*
BrZnCH2CO2t-Bu
THF, Reflux
CO2t-Bu
R
+
CO2t-Bu
R
OH
s = 15-42
L* =
Ph
Ph
Ph
N
H
N
HO

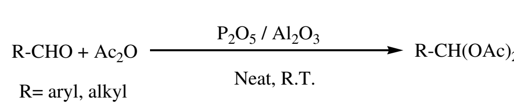

R1
O
R1
[Rh] catalyst
130 °C (bath)
12 h
R1
O
[Rh]
R1
R2—≡—R2
OH
R1
R2
R1
R2
E
- 2H
E = COR3
CO2R4
OH
R1
E
R1
up to 75%

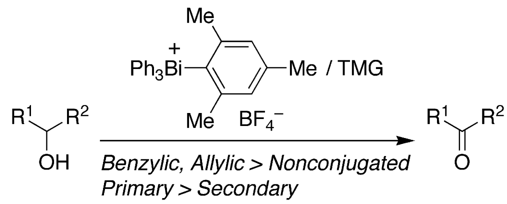

O
H
+
O
S
N
O
Bn
H
Erogorgiaene

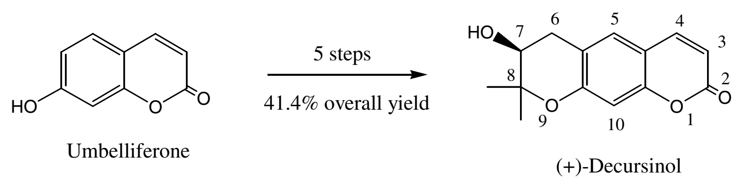

I_2 (5 mol%)
CH_3CN
r.t.
R =H, Me, COPh
R^1=H, p-ClC_6H_4, p-$MeOC_6H_4$
R^2=Me, Et, Ph

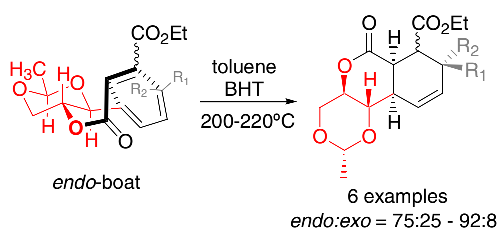

SAH
SAH
1
3a
3b
5a
5b
12
19
OBz
$nC_{10}H_{21}$
OBn

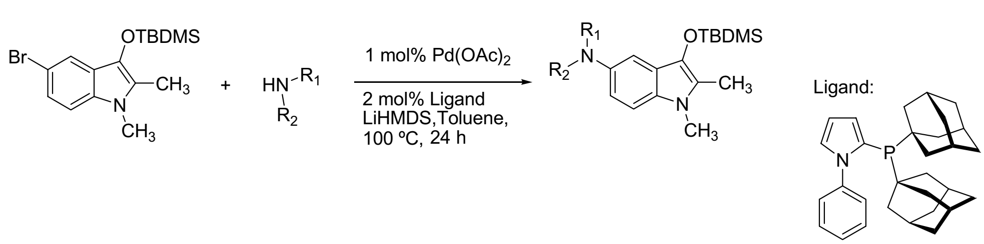

"One pot"
2eq PPh_3/CBr_4
10 eq NaN_3
then Ac_2O/Pyr
"One pot"
4eq PPh_3/CBr_4
20 eq NaN_3
then Ac_2O/Pyr


R-CHO + Ac_2O
P_2O_5 / Al_2O_3
Neat, R.T.
R-CH(OAc)$_2$
R= aryl, alkyl



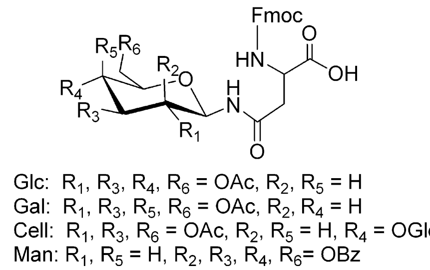




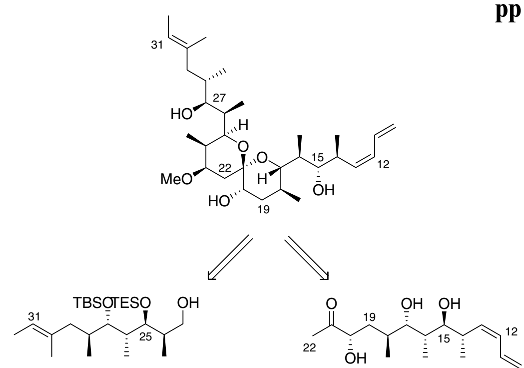


The palladium-catalyzed amination of 3-silyloxy-5-bromo-indole with primary and secondary amines leads smoothly to new amino-functionalized indoles in good yields (up to 91%).

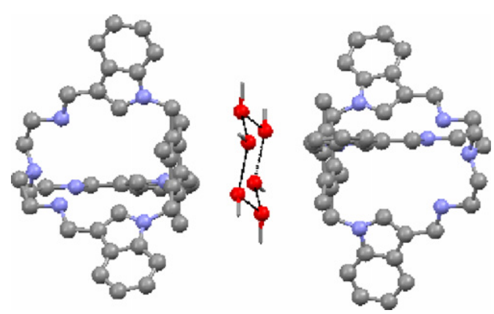
The optimization of the coupling reaction between aspartic and glutamic acid side chains and a series of protected aminosugars using microwave irradiation is reported.

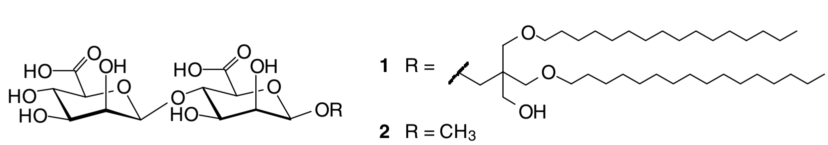


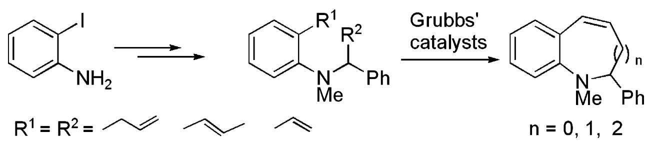
The synthesis of the C23–C32 fragment of spirangien A is reported using Evans' alkylation, Evans–Metternich aldol reaction and a substrate controlled stereoselective reduction.

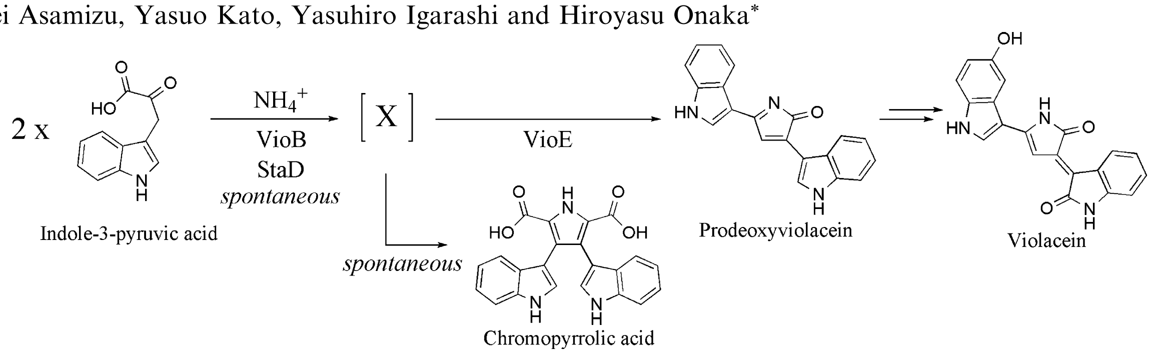


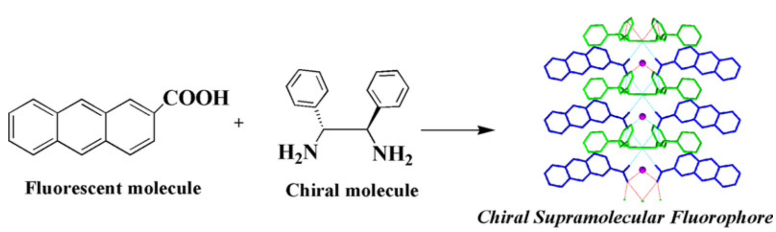
A discrete cyclic S_6-symmetric hexameric methanol cluster sandwiched between the hydrophobic ends of novel indole-based cryptand units is described.

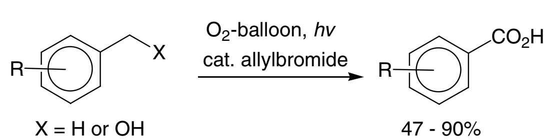




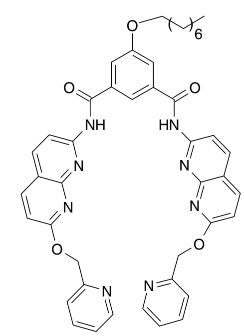

I
NH2
R1
R2
N
Me
Ph
Grubbs' catalysts
n
n = 0, 1, 2
R1 = R2 =

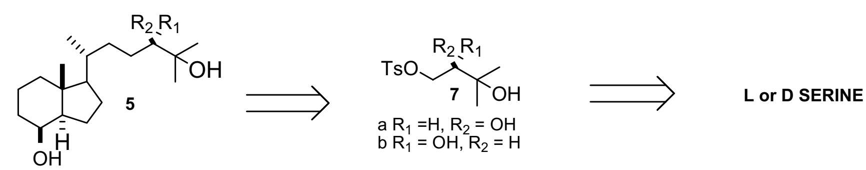

2 x
Indole-3-pyruvic acid
NH4+
VioB
StaD
spontaneous
[X]
VioE
spontaneous
Chromopyrrolic acid
Prodeoxyviolacein
Violacein

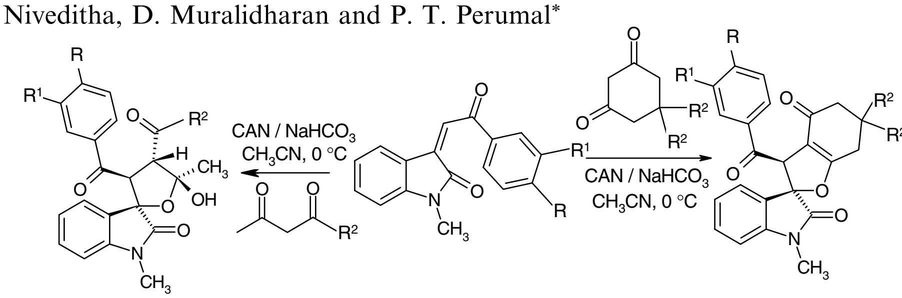

COOH
Fluorescent molecule
H2N
NH2
Chiral molecule
Chiral Supramolecular Fluorophore


R
X
X = H or OH
O2-balloon, hv
cat. allylbromide
CO2H
47 - 90%

A naphthyridine-based charge neutral receptor has been designed and synthesized. Its complexation with a series of carboxylic acids, involved in Krebs cycle, has been studied by [1]H NMR, UV–vis and fluorescence methods.







OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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ISSN 0040-4039