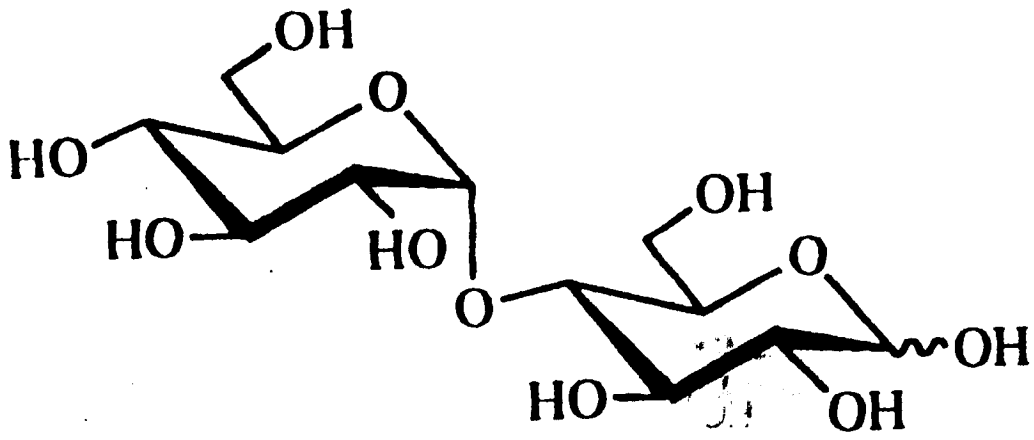
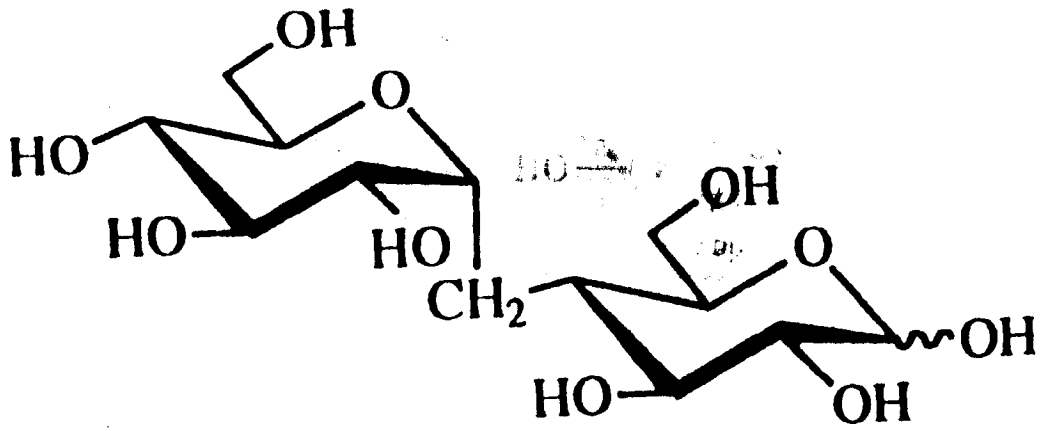
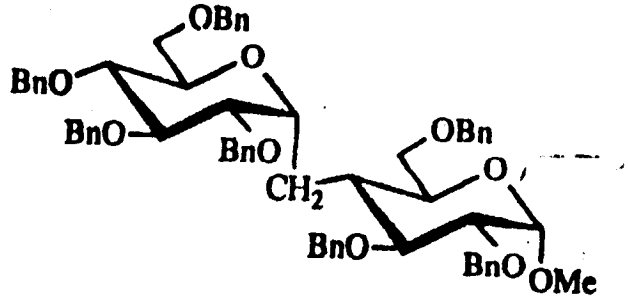
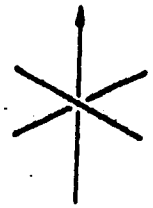
Maltose



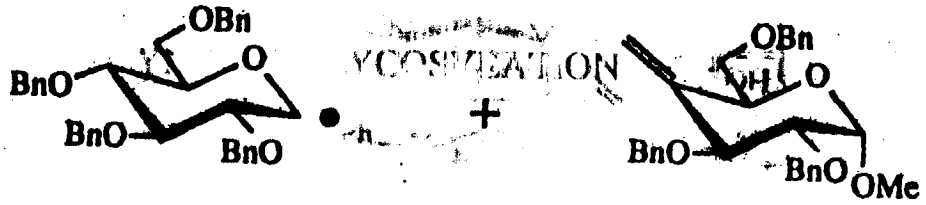
C- Maltose







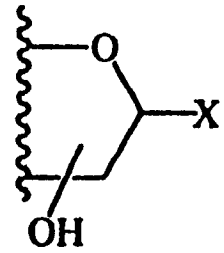
no reaction

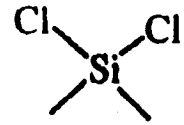


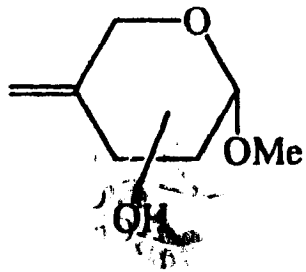
Nucleophilic radical

Non-electrophilic alkene

CHEMICAL C-GLYCOSYLATION



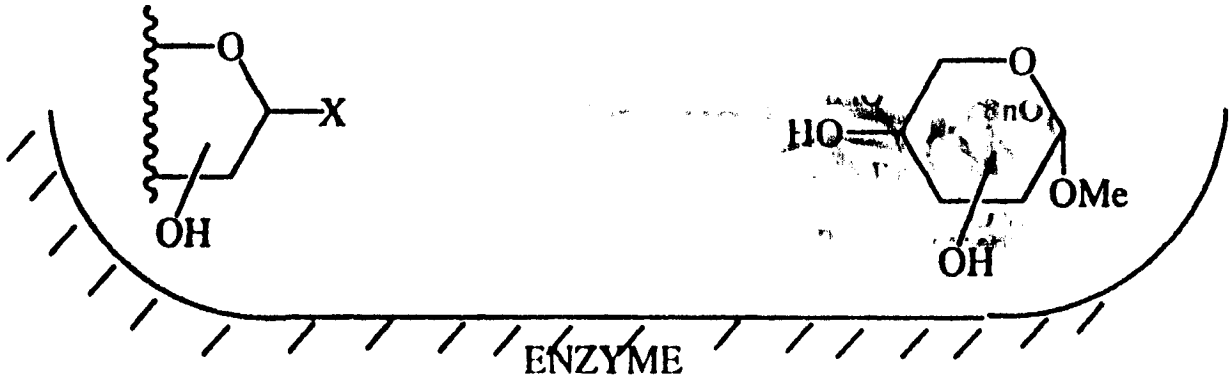


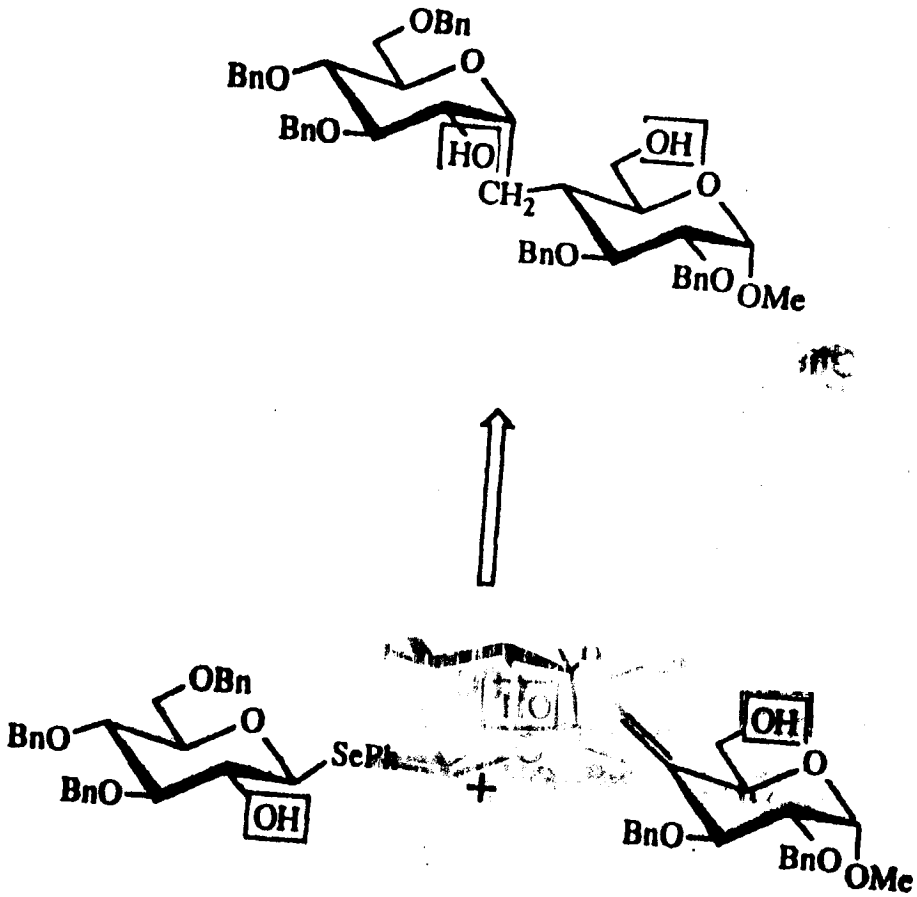


GLYCOSYL DONOR

GLYCOSYL ACCEPTOR

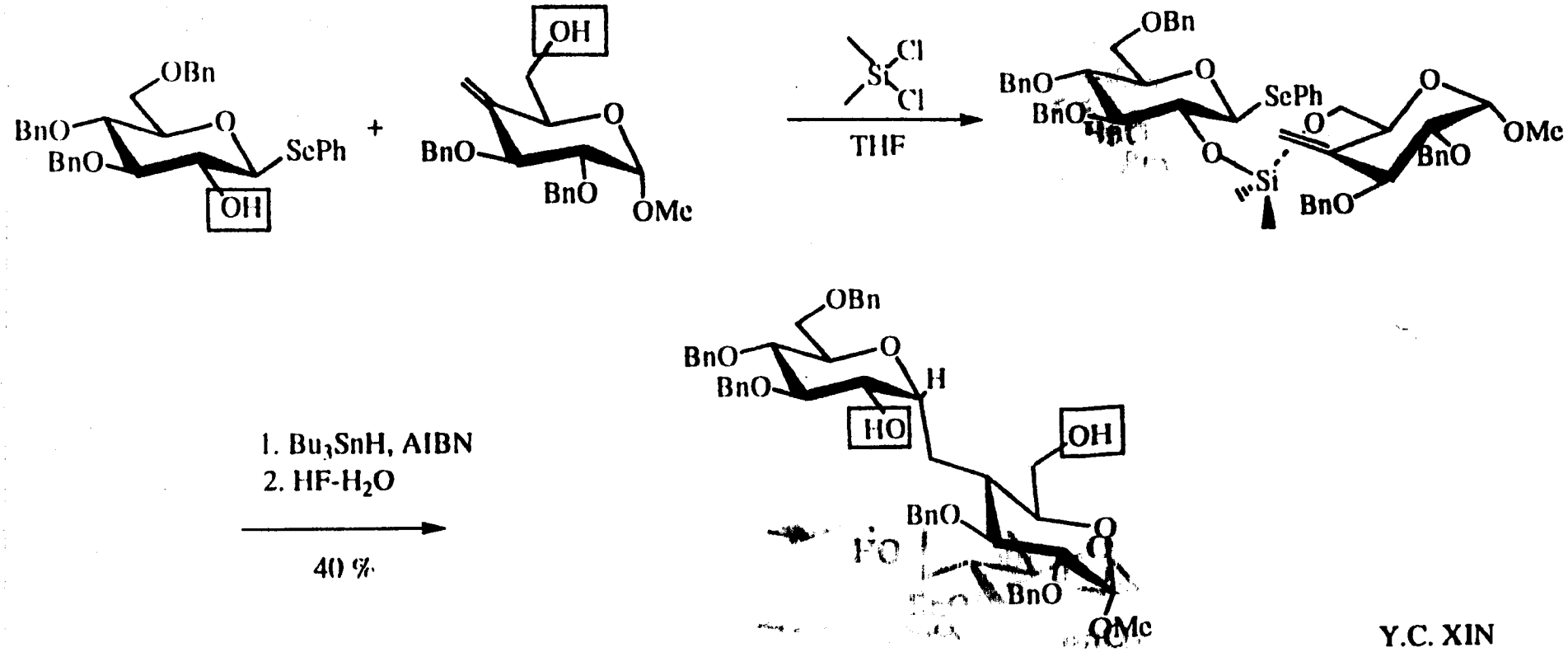
ENZYMATIC GLYCOSYLATION



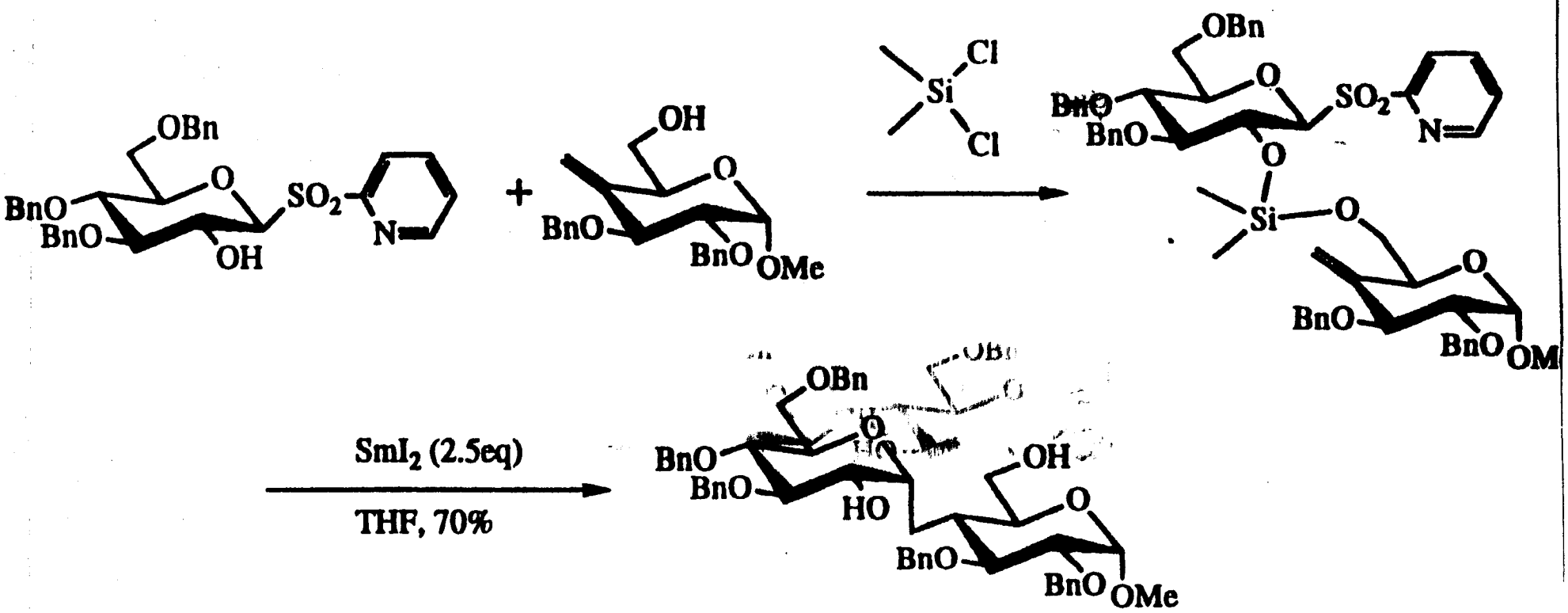


Radical donor

Radical acceptor

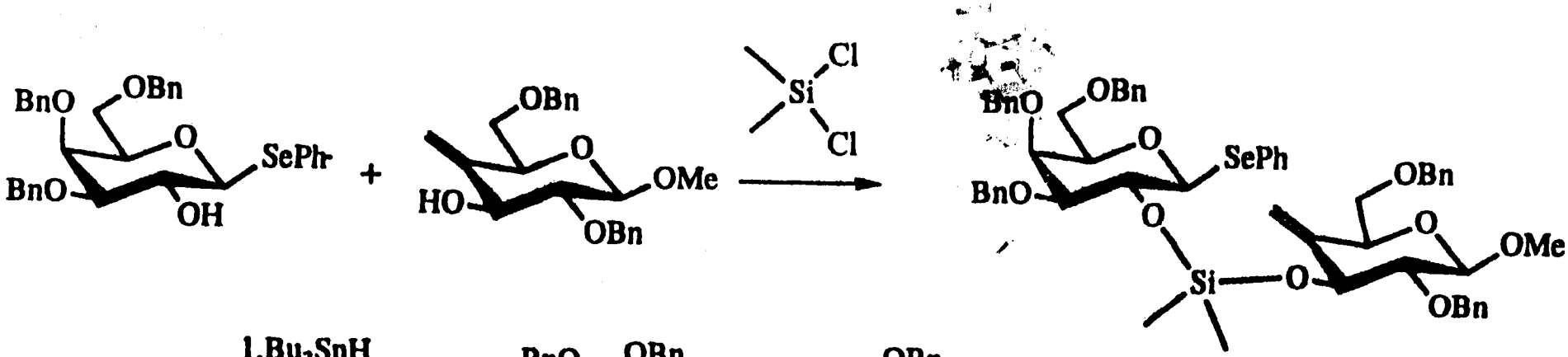

OBn
BnO
BnO
O
SePh
OH
+
OH
BnO
BnO
O
OMe
Cl
Si
Cl
THF
OBn
BnO
BnO
O
SePh
O
O
Si
O
O
OMe
BnO
BnO
1. Bu3SnH, AIBN
2. HF-H2O
40 %
OBn
BnO
BnO
O
H
HO
OH
BnO
O
BnO
OMe

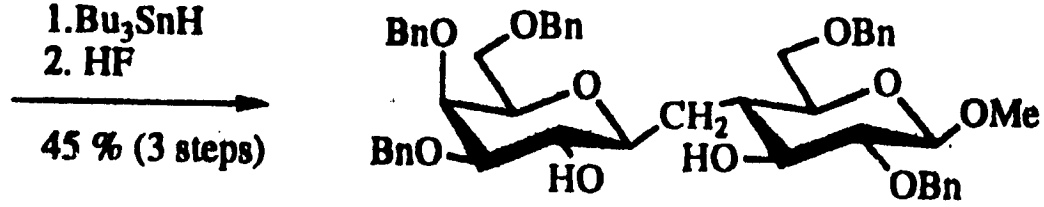
Y.C. XIN

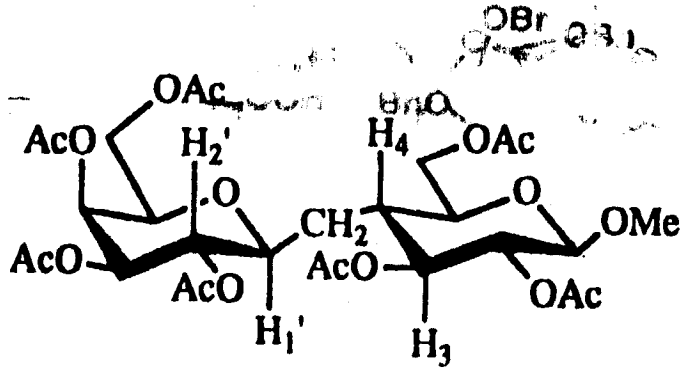


A. CHENEDE, 1995

AN EFFICIENT SYNTHESIS OF C-LACTOSE

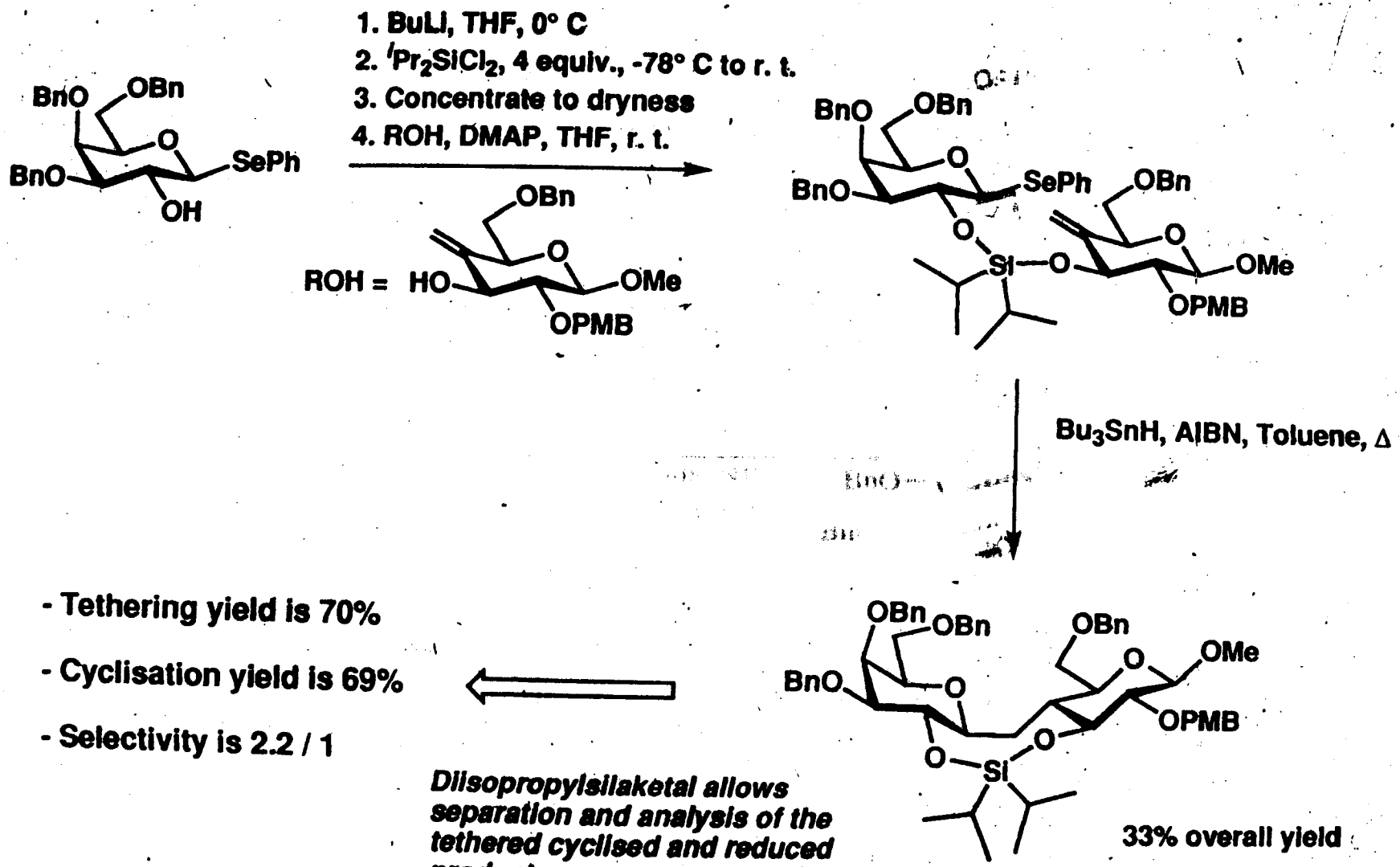




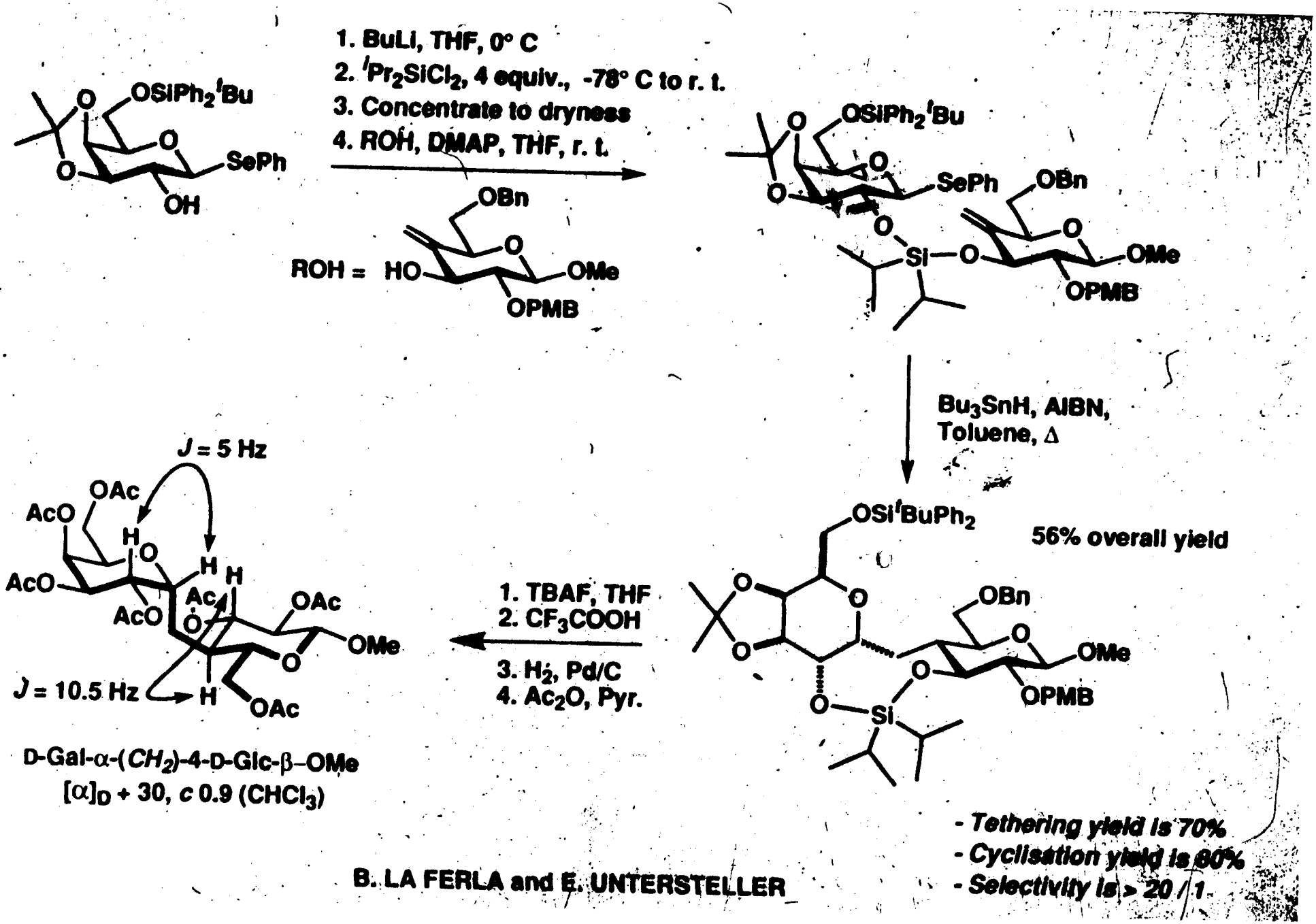


$J_{1',2'}$ 9.5 Hz $J_{3,4}$ 11.5Hz

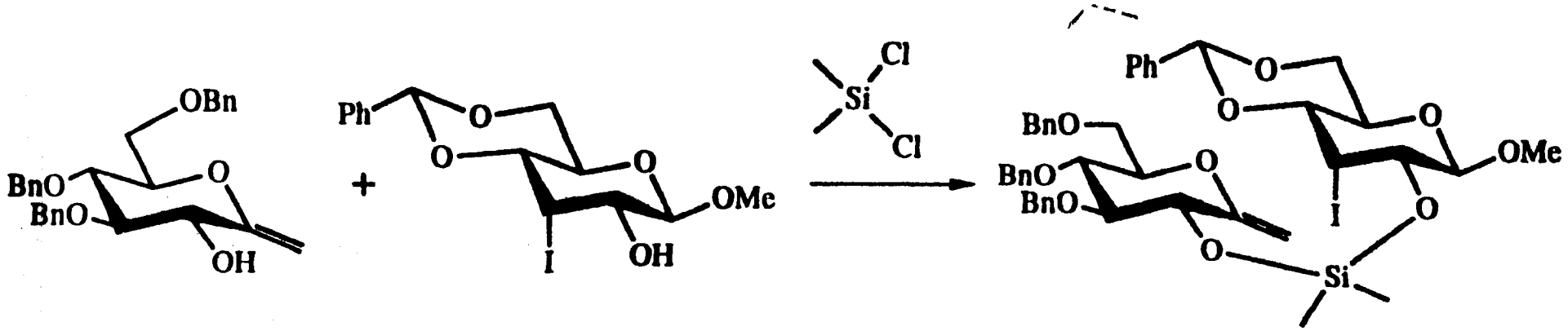
G. RUBINSTENN

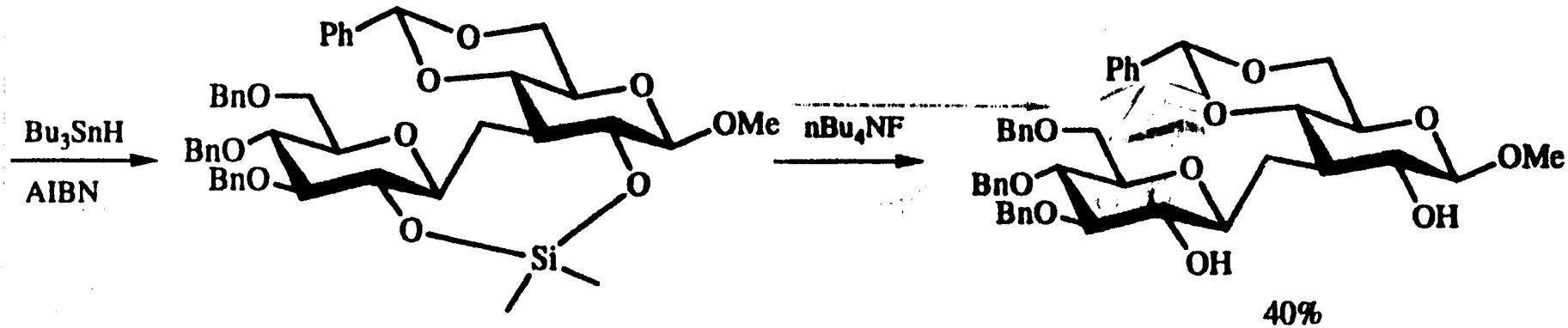


B. LA FERLA and E. UNTERSTELLER

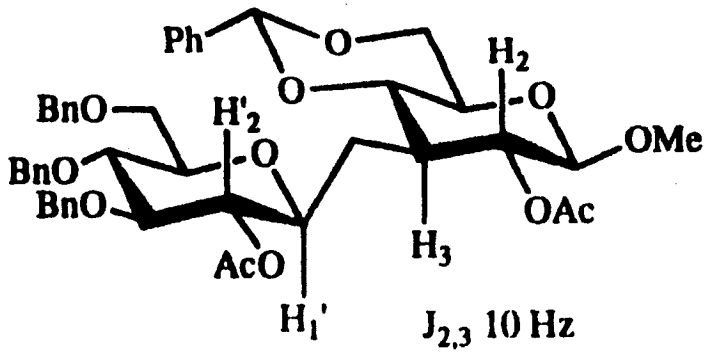


B. LA FERLA and E. UNTERSTELLER



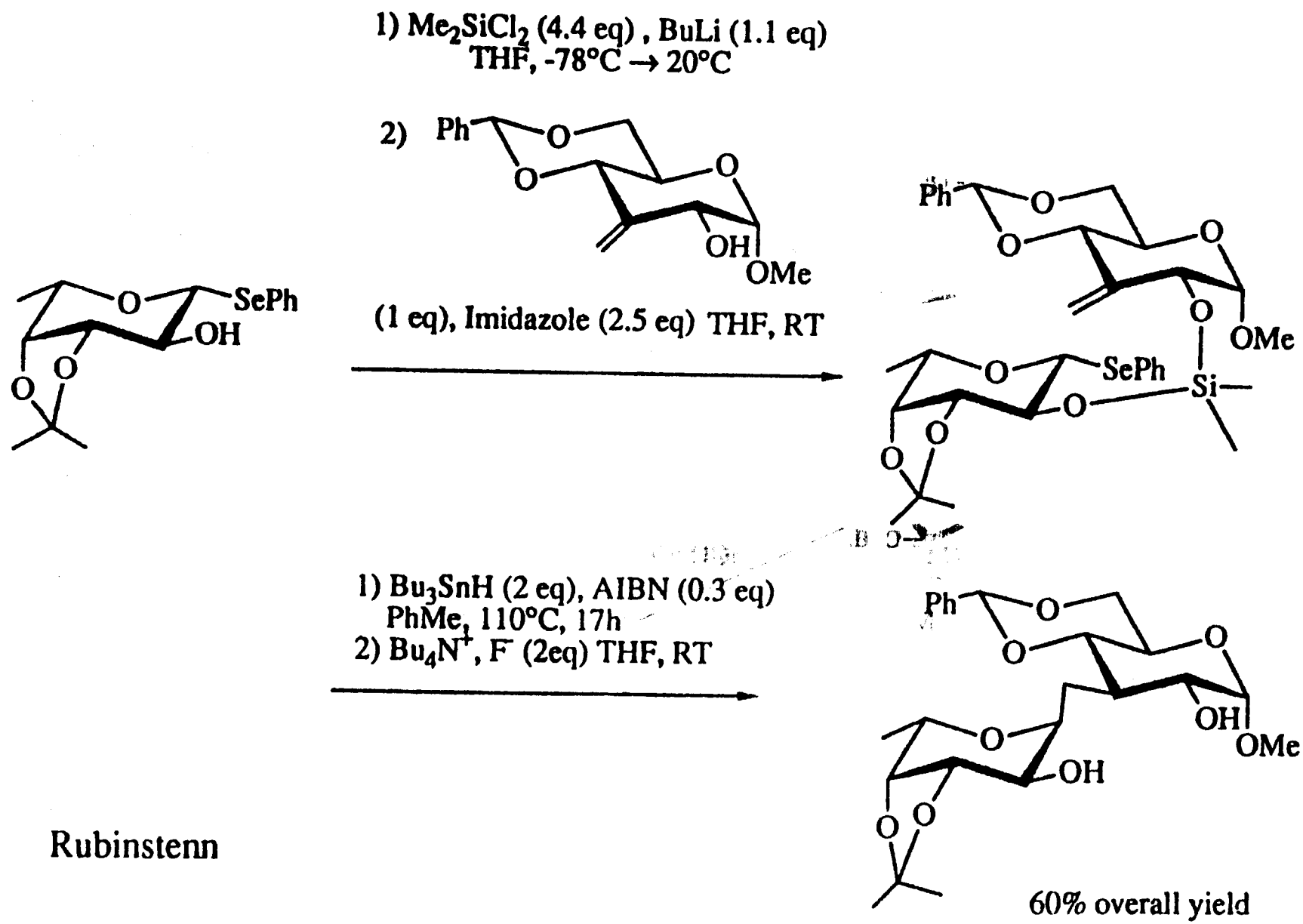


40%

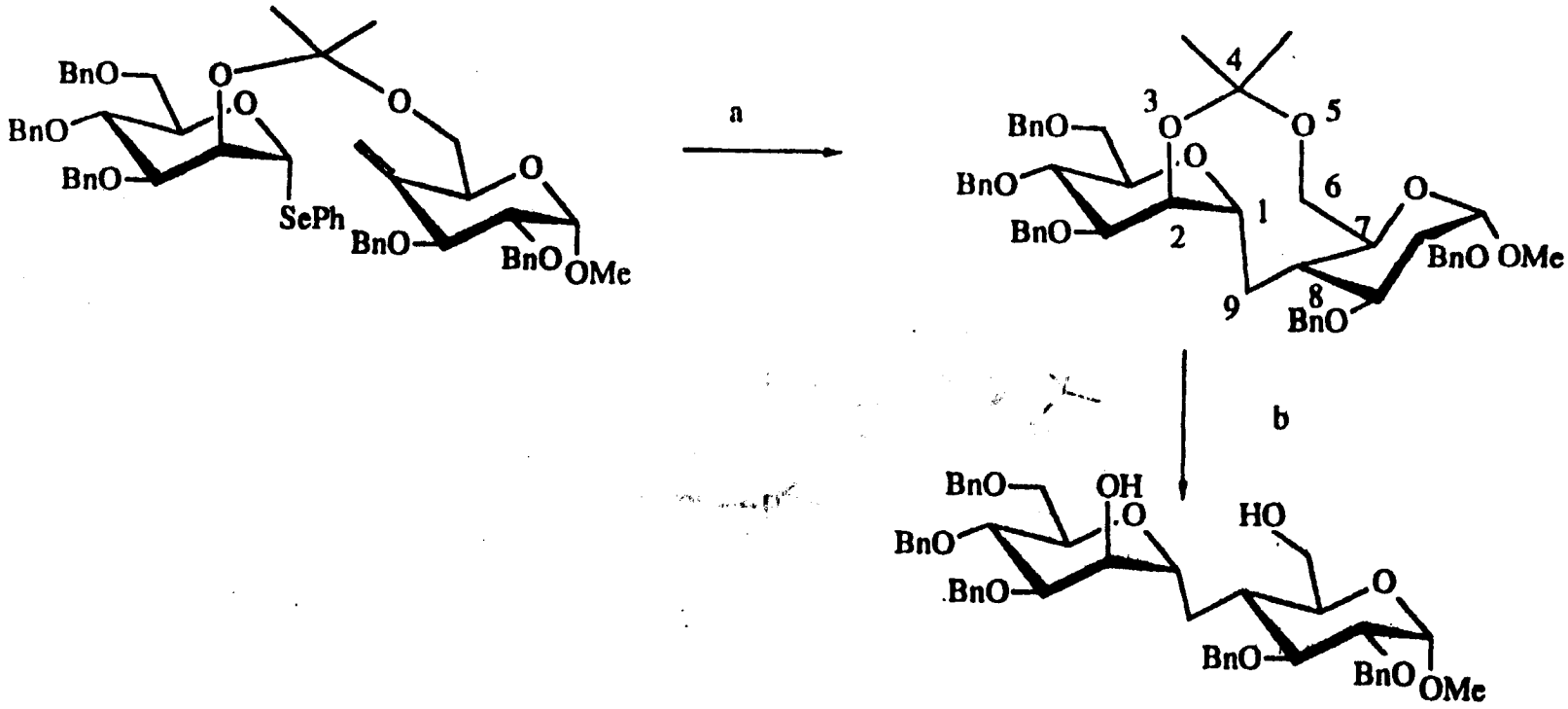


B. Vauzeilles, 1995

J1',2' 9.5 Hz


1) Me_2SiCl_2 (4.4 eq) , BuLi (1.1 eq)
THF, -78°C → 20°C
2)
(1 eq), Imidazole (2.5 eq) THF, RT
1) Bu_3SnH (2 eq), AIBN (0.3 eq)
PhMe, 110°C, 17h
2) Bu_4N^+, F^- (2eq) THF, RT
60% overall yield

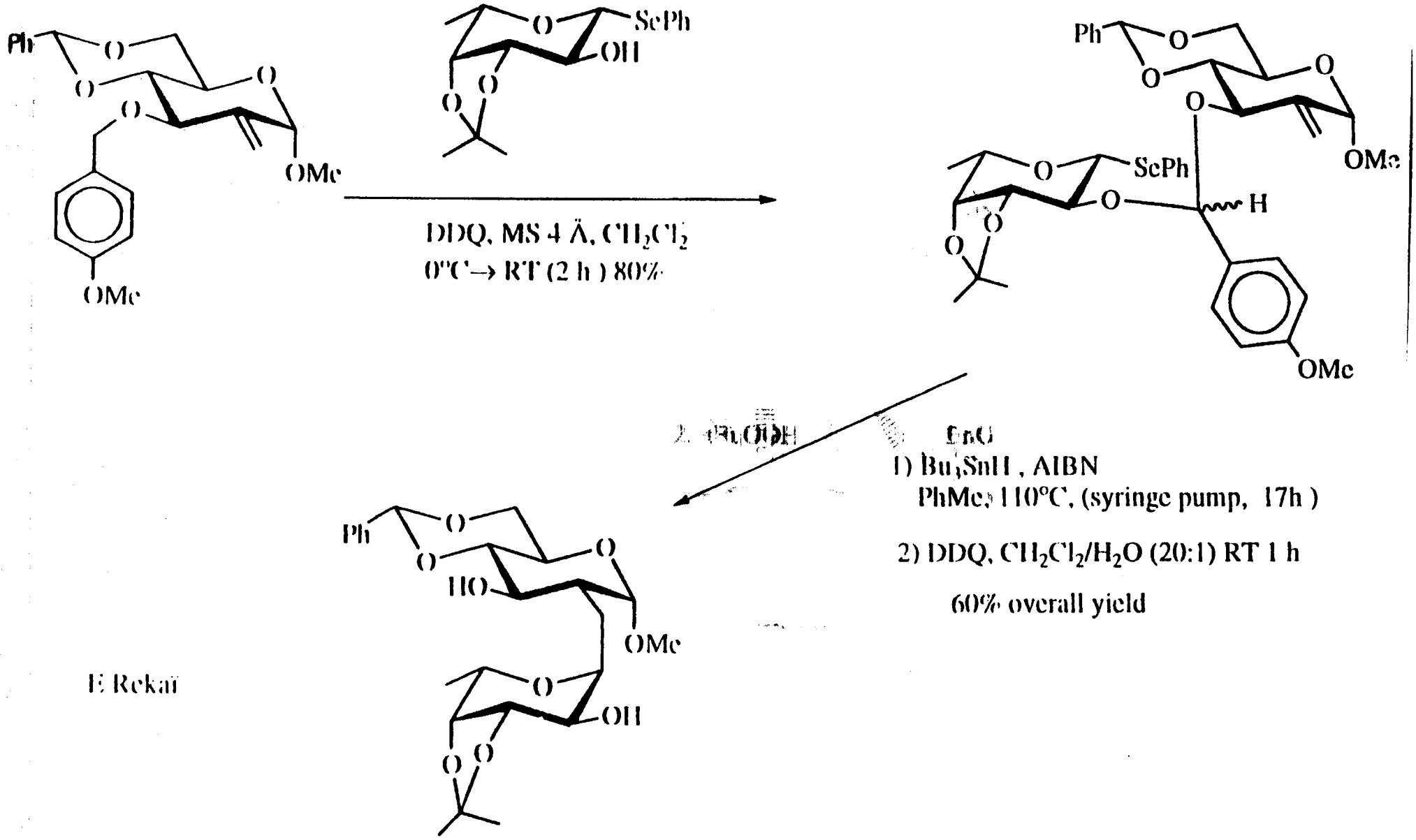
Rubinstenn



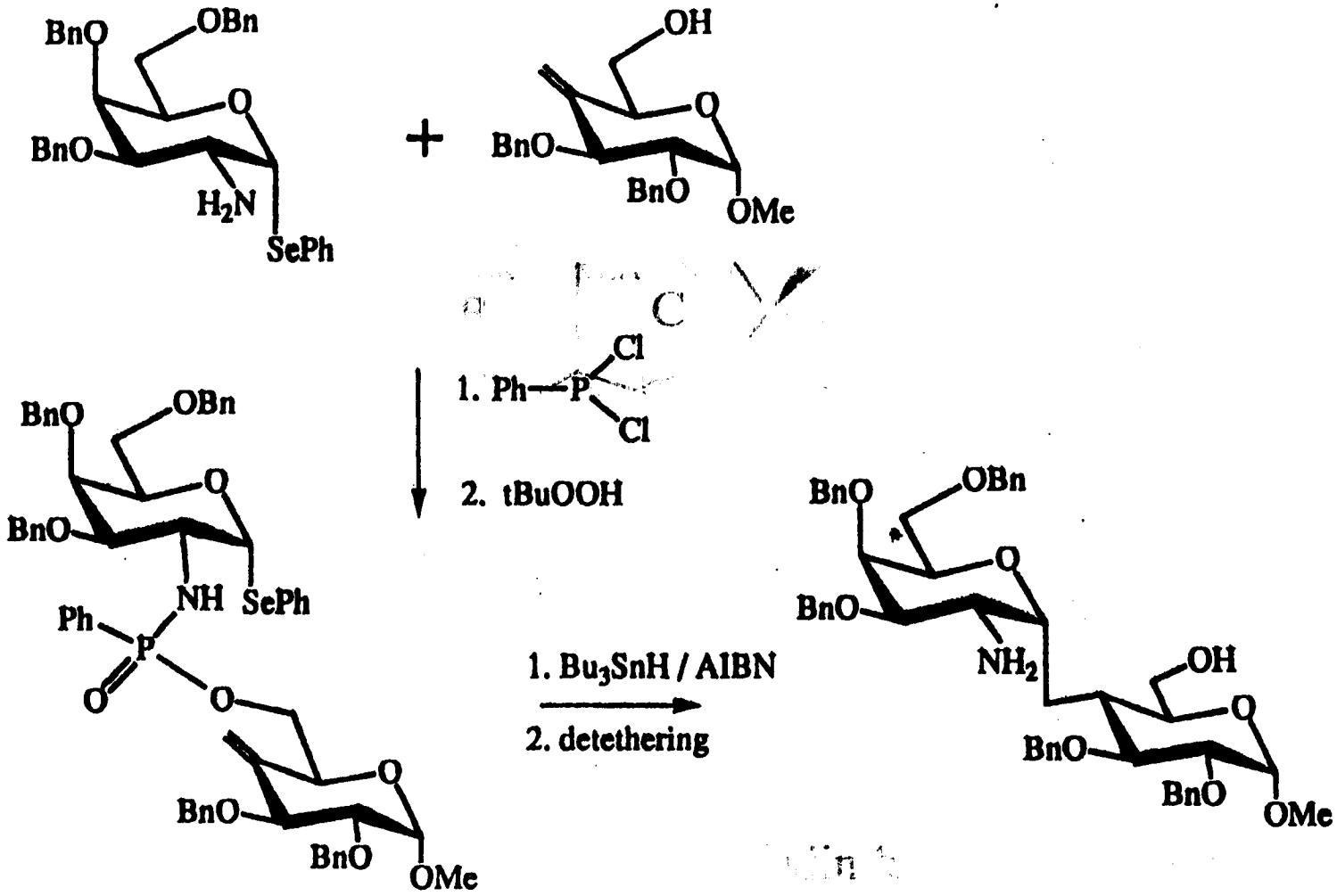
$[\alpha]_D$ +41° (c 0.86, $CHCl_3$)

a) Bu_3SnH, AIBN, Toluene, reflux, 17 h; b) CF_3COOH / H_2O, CH_2Cl_2, 15 min.
(overall yield a+b : 40%)

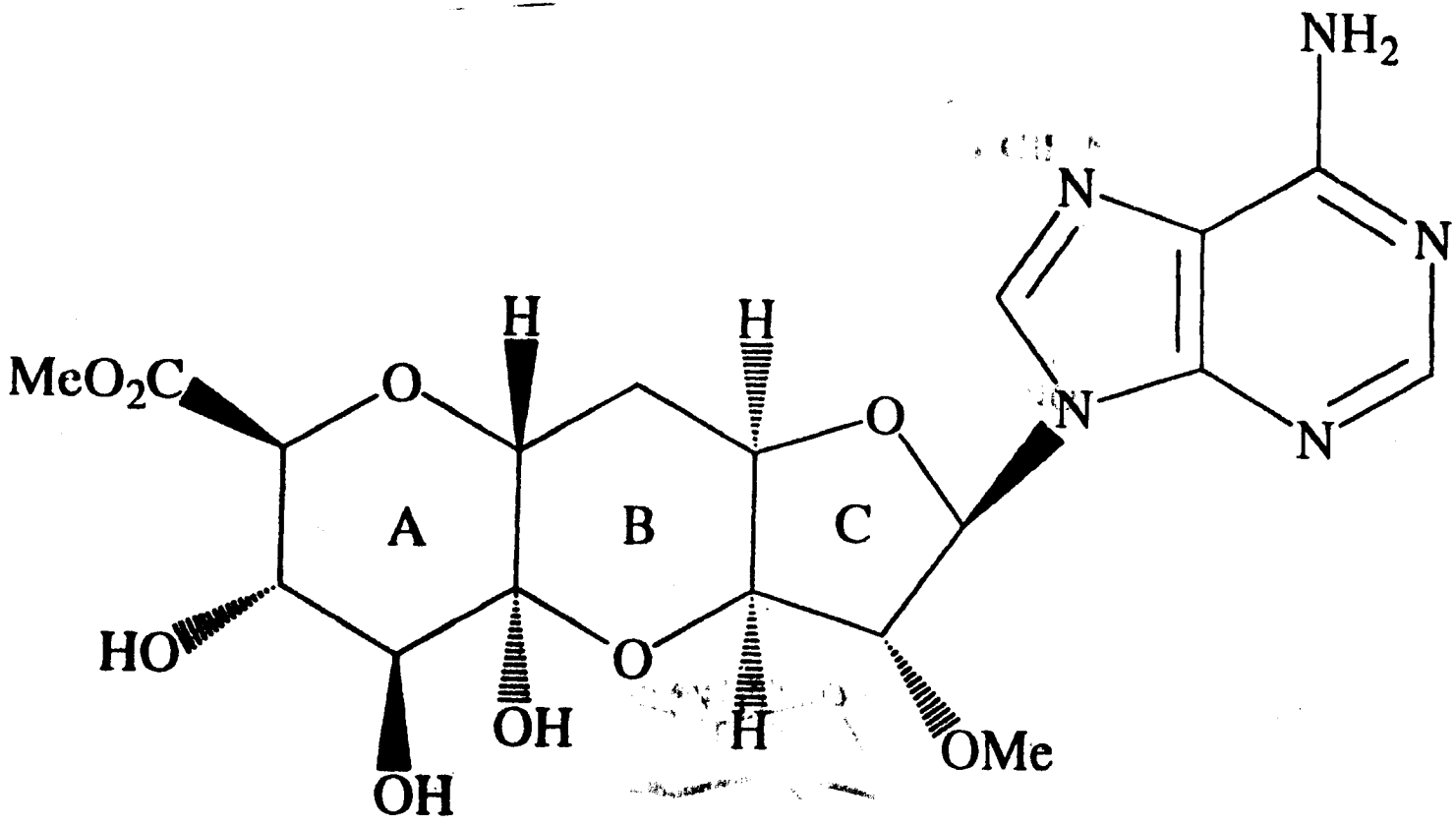
B. VAUZEILLES


Ph
OMe
OMe
SePh
OH
DDQ, MS 4 Å, CH_2Cl_2
0°C → RT (2 h) 80%
Ph
SePh
OMe
H
OMe
1) Bu_3SnH, AIBN
PhMe, 110°C, (syringe pump, 17h)
2) DDQ, CH_2Cl_2/H_2O (20:1) RT 1 h
60% overall yield
Ph
HO
OMe
OH

E Rekai



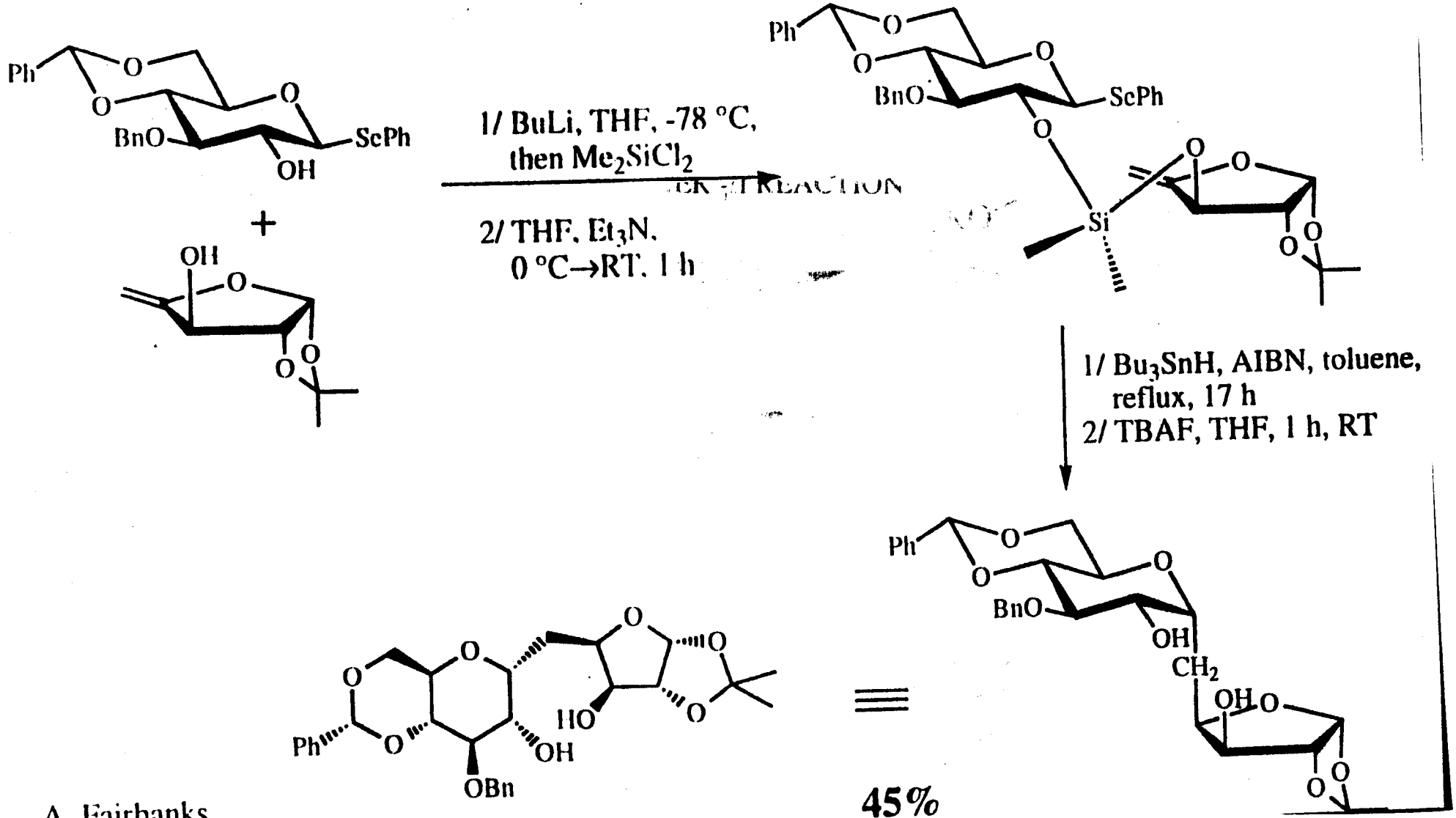
G. Rubinstenn



HERBICIDIN B

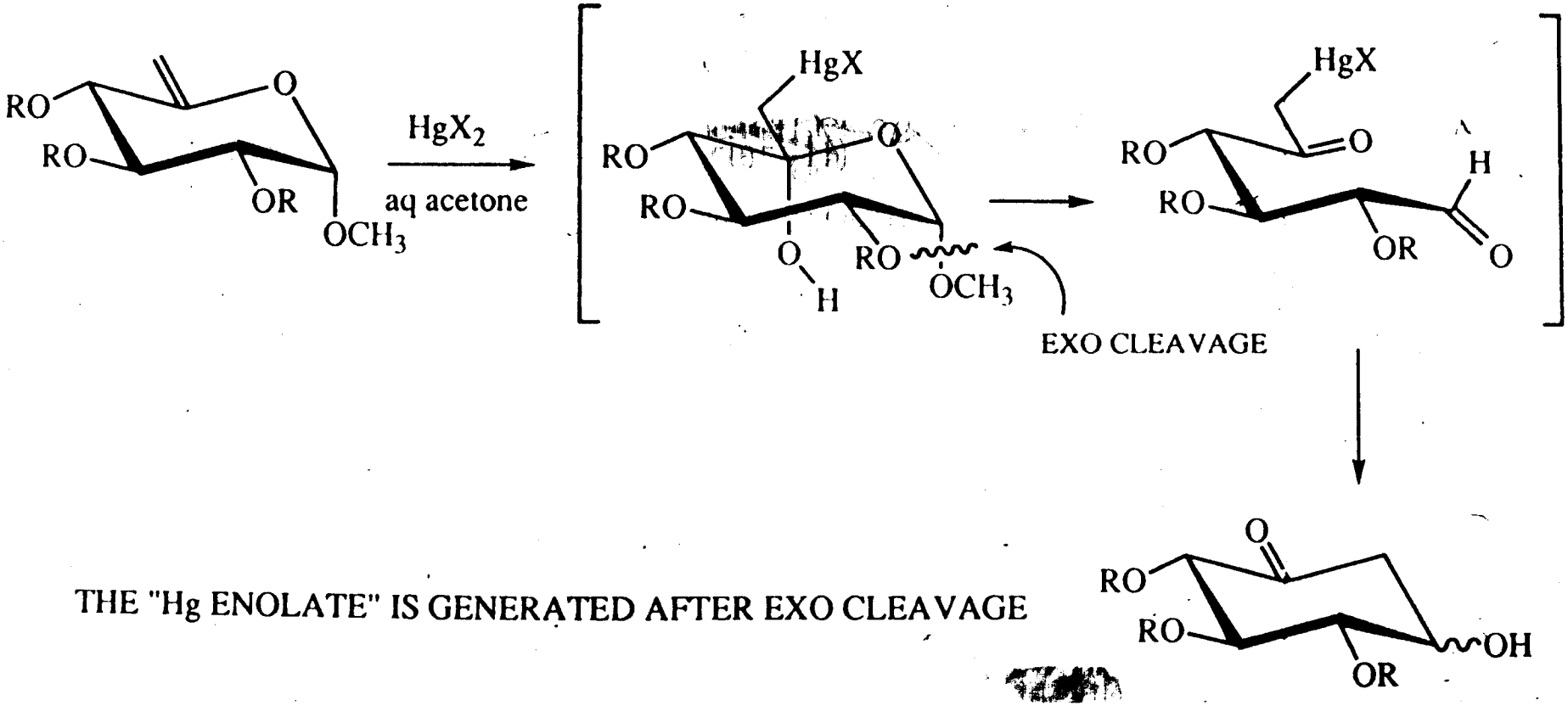
One member of the Herbicidin family
(Herbicidins A, B, C, E, F, G and also Aureonuclemycin)

AN EXPEDITIOUS SYNTHESIS OF THE CARBON SKELETON OF HERBICIDIN

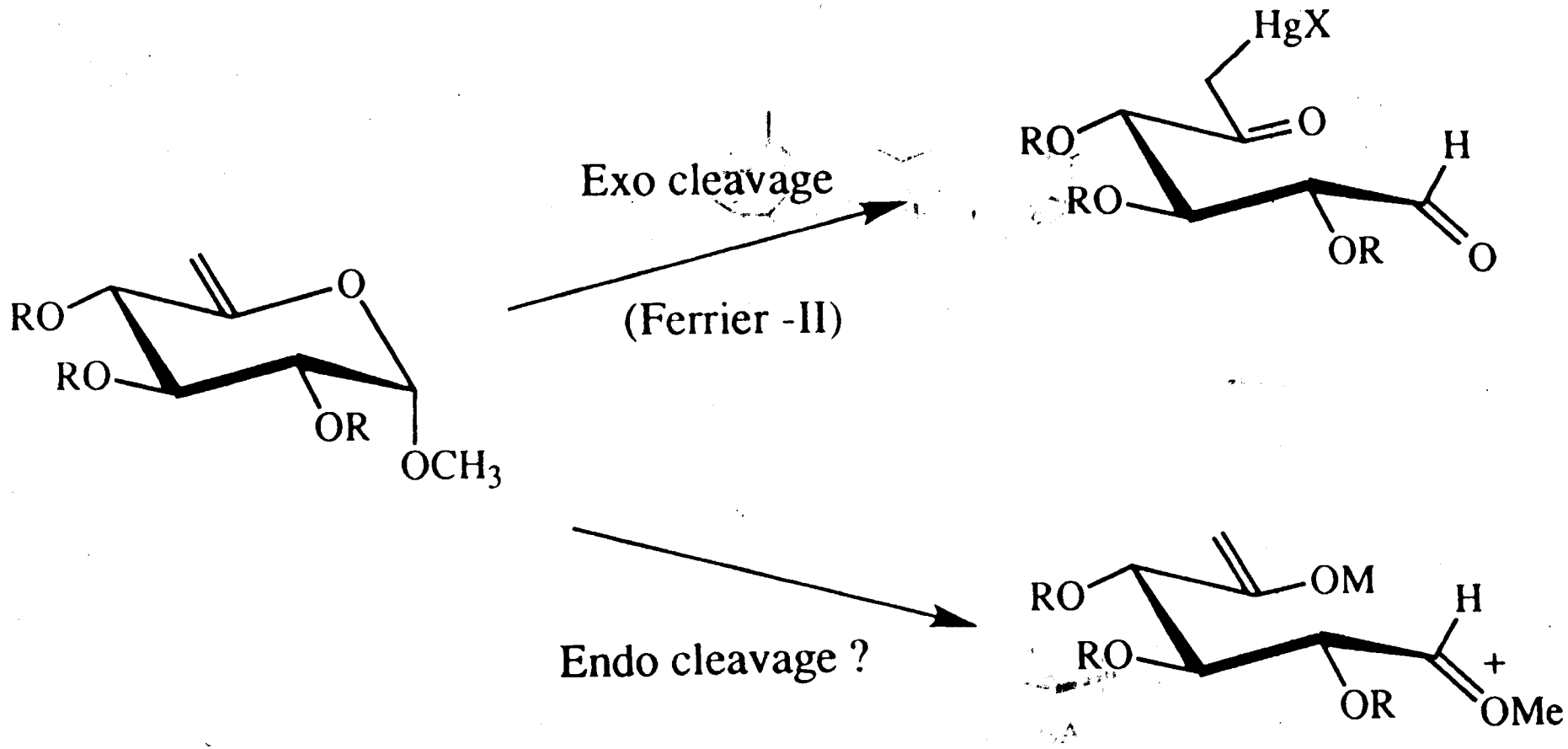


A. Fairbanks

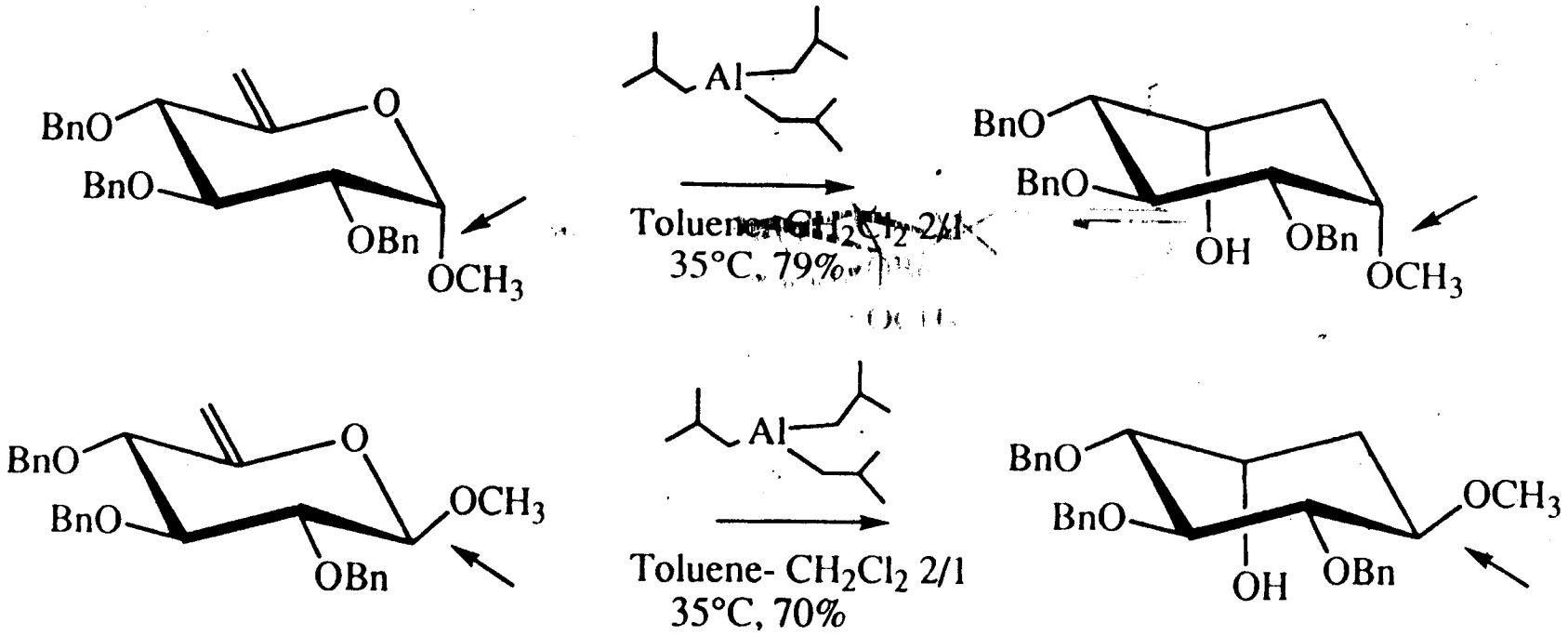
A USEFUL CARBOCYCLIC RING CLOSURE OF HEX-5-ENOPYRANOSIDES : THE FERRIER -II REACTION



THE "Hg ENOLATE" IS GENERATED AFTER EXO CLEAVAGE

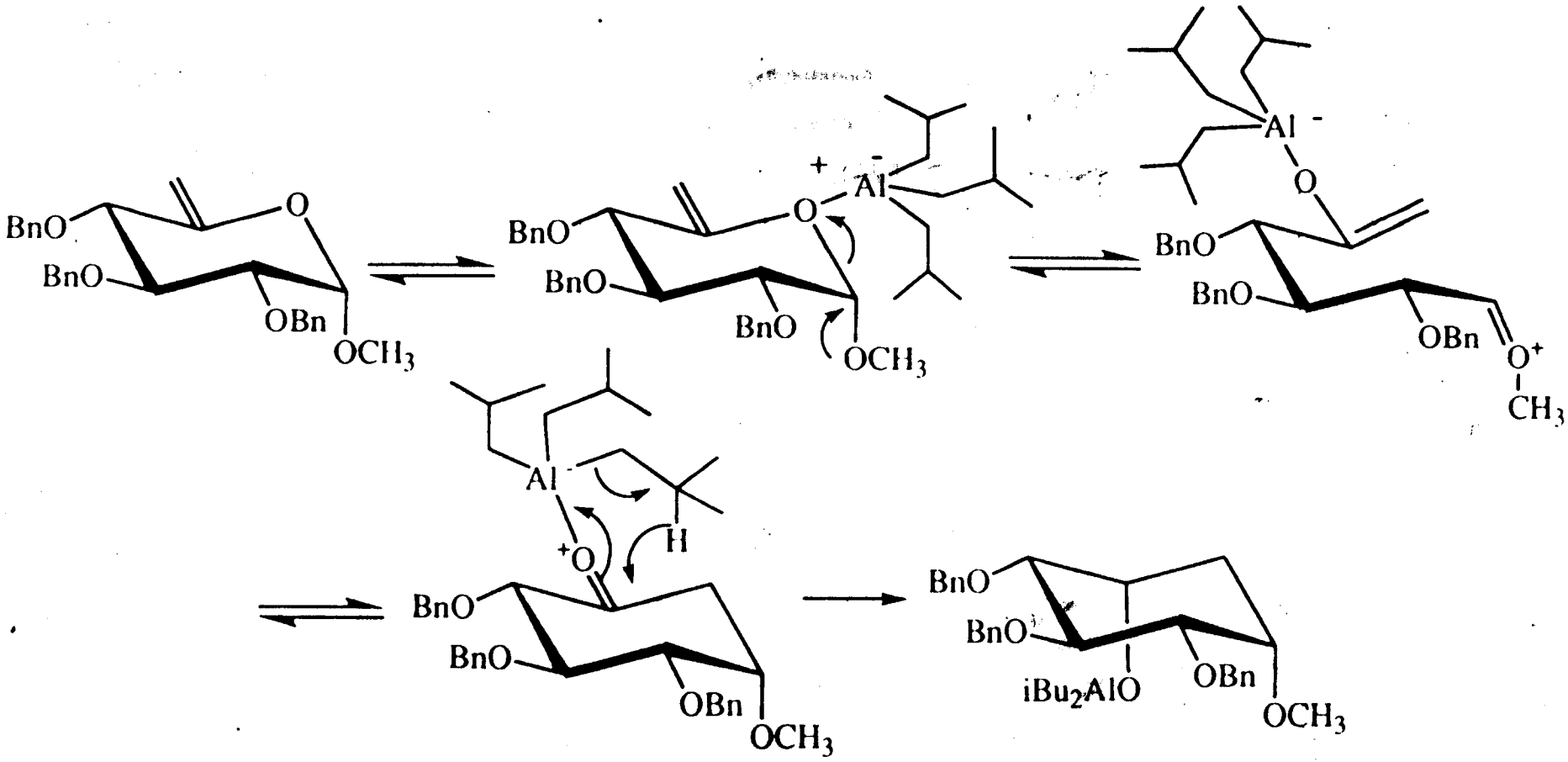

HgX
O
RO
RO
H
OR
O
Exo cleavage
(Ferrier -II)
RO
RO
O
OR
OCH3
Endo cleavage ?
OM
RO
RO
H
+
OR
OMe

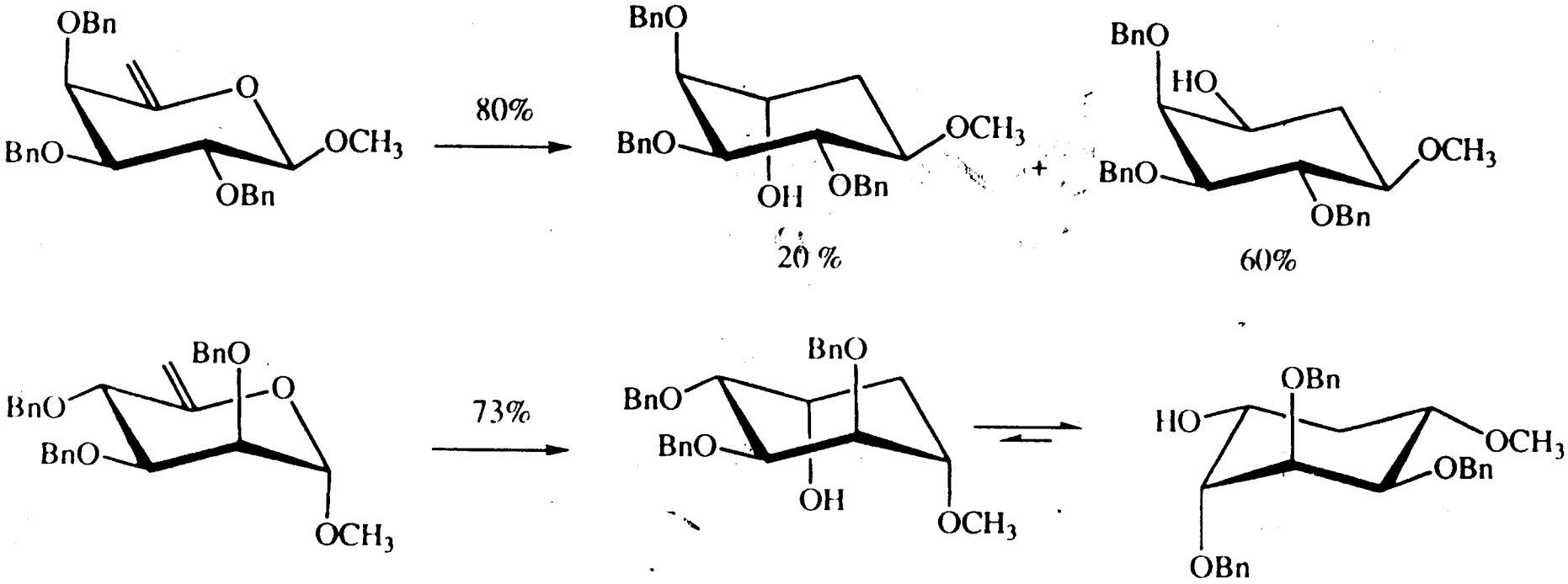
A NOVEL CARBOCYCLIC RING CLOSURE OF HEX-5-ENOPYRANOSIDES



S. K. DAS

THE ANOMERIC CONFIGURATION OF THE STARTING GLUCOSIDE IS RETAINED


BnO
BnO
OBn
OCH3
O
Al
+
-
BnO
BnO
BnO
OCH3
O
Al
-
O
BnO
BnO
OBn
O+
CH3
Al
+O
H
BnO
BnO
OBn
OCH3
BnO
BnO
iBu2AlO
OBn
OCH3


OBn
O
BnO
OCH3
OBn
80%
BnO
BnO
OCH3
OH
OBn
20 %
+
BnO
HO
BnO
OCH3
OBn
60%
BnO
BnO
O
BnO
OCH3
73%
BnO
BnO
BnO
OH
OCH3
OBn
HO
OCH3
OBn
OBn

S. K. DAS