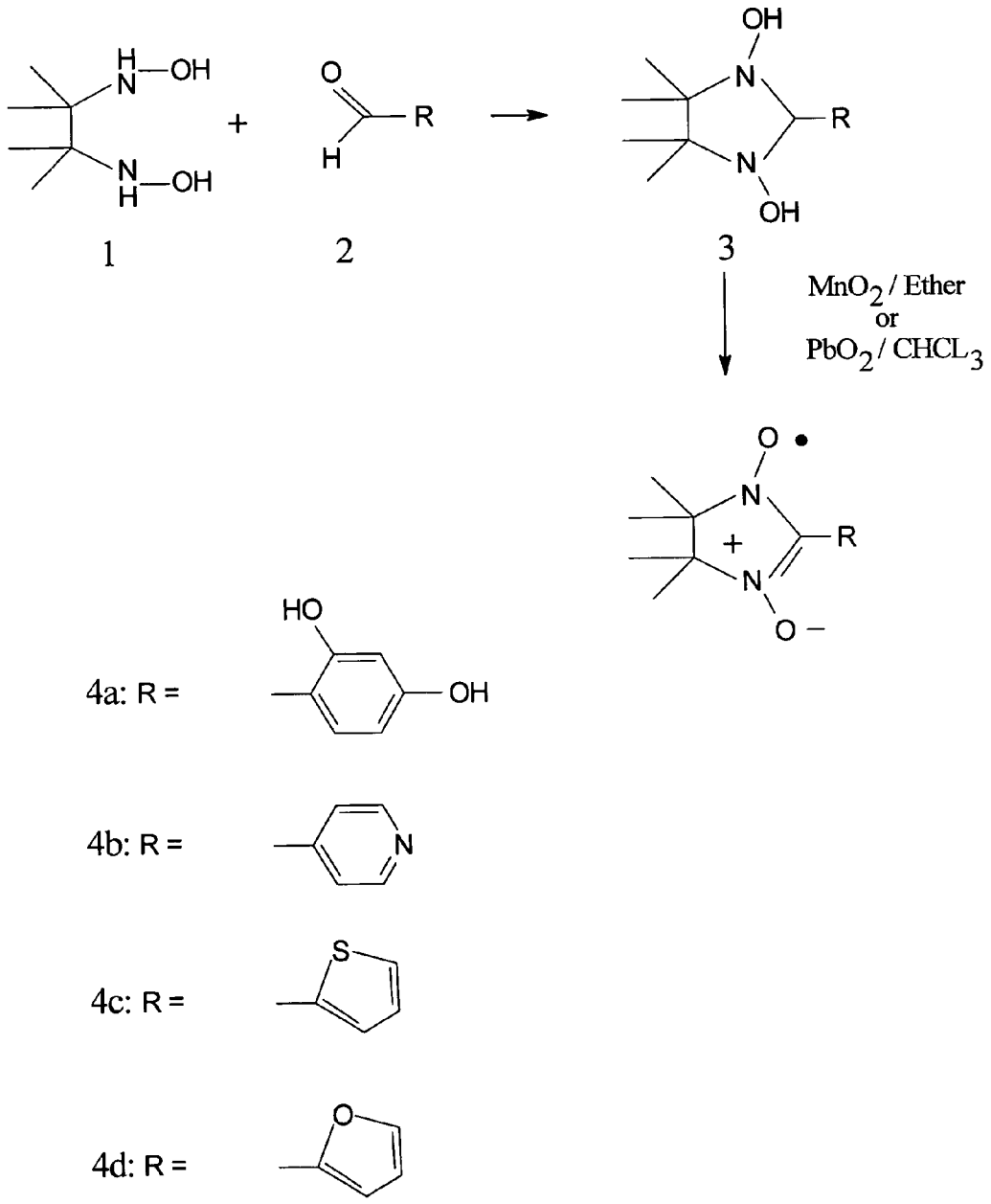
FIG. 1


H
N—OH
N
H—OH
1
+
O
R
H
2
OH
N
R
N
OH
3
MnO2 / Ether
or
PbO2 / CHCL3
O •
N
+
R
N
O −
4a: R =
HO
OH
4b: R =
N
4c: R =
S
4d: R =
O