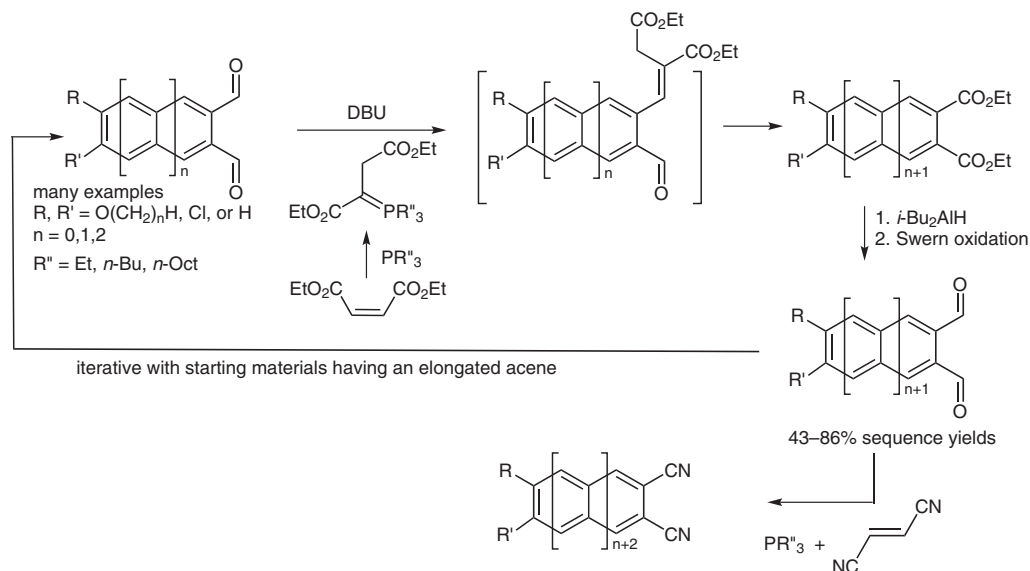


Acenes One Ring at a Time



Significance: Higher acenes have emerged as a very important class of organic semiconductors. This approach to their synthesis proceeds in high efficiency and yields final products with electron-withdrawing groups attached to the acenes. The electron-withdrawing groups are of interest for increased stability in air as well as the ability to create materials capable of transporting electrons. In total, 28 different extended acenes were synthesized.

Comment: It was demonstrated that higher acenes can be produced by this method from protected pentacenes and heptacenes. This feature plus the stability imparted by the electron-withdrawing groups suggests that this method may allow for superior access to higher acenes that are of interest for investigations of organic field-effect transistors.

Category

Synthesis of
Materials and
Unnatural Products

Key words

acenes

semiconductors

conjugation

of the month