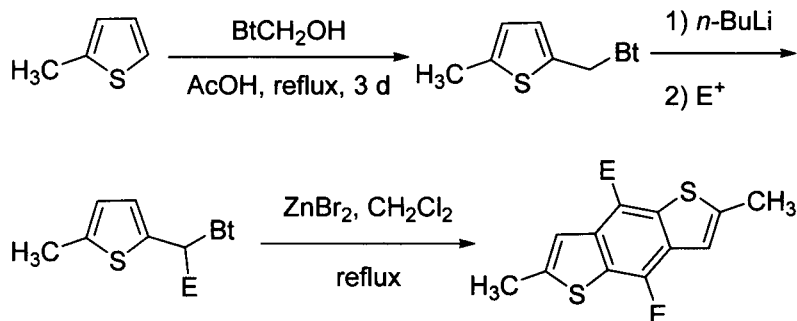


Intramolecular Cyclization

Katritzky and co-workers illustrated the reactivity of the *C3* position with the formation of a thiophene dimer via an intramolecular cyclization.⁸⁹ The cyclization was performed first by lithiation followed by the addition of zinc bromide under refluxing conditions to produce the dimerized product.



The synthesis of thieno-[3,2-*b*]-pyrroles reported by Reddy and co-workers is another interesting example of an intramolecular cyclization at the *C3* position.⁸² When the product of a Vilsmeier–Haack reaction is condensed with ethyl azidoacetate, the resulting azido compound undergoes an intramolecular cyclization under refluxing conditions to yield a thieno-[3,2-*b*]-pyrrole ring system. The thieno-[3,2-*b*]-pyrrole ring system can also be accessed through condensation of an enol ester and a nitro group at the *C3* position.

