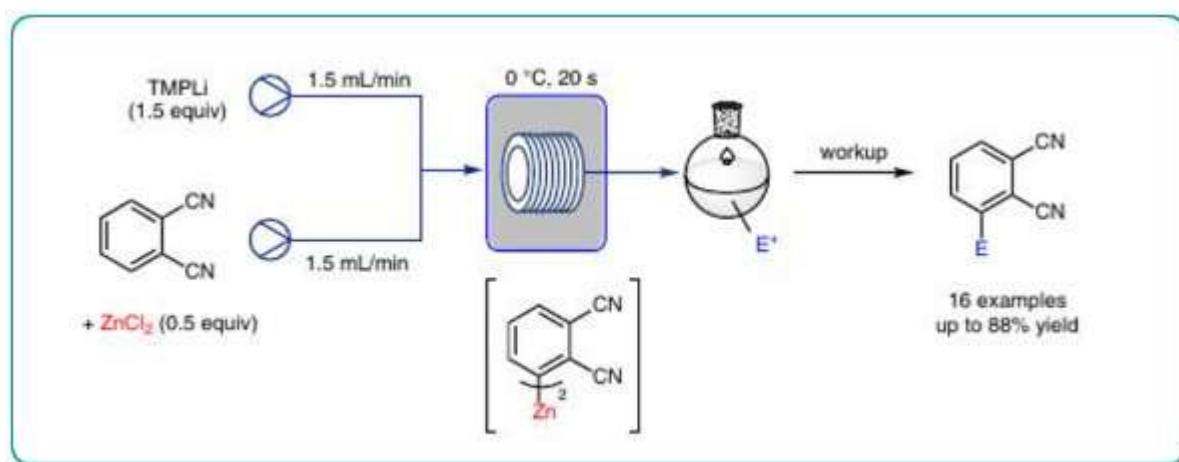


Publication 66: Selective Zincation of 1,2-Dicyanobenzene and Related Benzonitriles Using In Situ Trapping Metalations Under Continuous Flow Conditions



A mild and convenient metalation procedure for the functionalization of 1,2-dicyanobenzene and related polyfunctionalized benzonitriles using the Uniqsis FlowSyn is reported.

The addition of TMPLi to a mixture of an aromatic substrate with a metallic salt such as ZnCl₂ under appropriate conditions (0 °C, 20 s) leads to fast in situ lithiation of the arene followed by transmetalation with ZnCl₂ to afford the corresponding functionalized arylzinc compounds.

Trapping with various electrophiles afforded the adducts in high yields.

The reaction scope of these in situ trapping metalations in flow is broader and needs less equivalents of the base and the metal salt than the corresponding batch procedure.

[M. Ketels, D. S. Ziegler, P. Knochel, Synlett, 2017; 28\(20\): 2817-2822](#)