Sequential C–C Bond Formation via Allylic and Benzylic Boronic Acids

Significance: Allylic and benzylic boronic acids, prepared in situ from flow-generated diazo compounds and stable boronic acids, were used in sequential C–C bond formation reactions. For example, the sequential reaction of (4-methoxyphenyl)boronic acid with a flow-generated diazo compound and acetaldehyde gave a precursor of the natural product bakuchiol in 60% yield from a single operation.

Comment: The authors have recently reported the reaction of aryloboronic acids with flow-generated diazo compounds (Chem. Sci. 2015, 6, 1120). The current paper describes the sequential formation of up to three C–C bonds.

Flow chemistry
C–C bond formation
boronic acids
diazo compounds
iterative synthesis
cascade reaction