Deprotonated α -Aminonitriles as versatile Building Blocks for the construction of N-Heterocycles

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The strong anion stabilizing capacity of the nitrile group permits □-aminonitriles with a primary or secondary amino group to be used as readily available □-aminocarbanion equivalents after deprotonation with a suitable base. These agents are versatile building blocks for the construction of highly substituted amines and N-heterocycles which can be obtained in very short reaction sequences or one-pot procedures. The related rearrangements of nitrile-stabilized ammonium ylides allow ring transformations such as the construction of protoberberine alkaloids in a single step.