Lecture 2: Amphoteric aziridine aldehydes

In 2006, our studies in synthesis have led to the development of reagents that contain seemingly incompatible functional groups – an amine (in the form of an aziridine) and an aldehyde. What started as a curiosity-driven project has turned into sustained exploration of a virtually untouched segment of chemistry. The multifunctional nature arising from the concept of forced orthogonality enables aziridine aldehydes to participate in reactions of high atom- and step- economy, seamlessly leading to efficient syntheses characterized by minimal reliance on protecting groups. In this lecture, I will illuminate several key applications of aziridine aldehydes developed in our lab.