

## Allylic C—H Amination for the Preparation of *syn*-1,3-Amino Alcohol Motifs

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We report a palladium/sulfoxide catalyzed allylic C—H amination to furnish *syn*-oxazinanone heterocycles *en route* to *syn*-1,3-amino alcohols. Key to the high reactivity observed under mild conditions (45°C, 24h) is the use of an electron deficient *N*-nosyl carbamate nitrogen nucleophile that enables high concentrations of the active anionic species to be reached using endogenous catalytic acetate base. Additionally, recent developments have led to the discovery that the addition of catalytic Lewis acid activators can reduce the necessary reaction time to only 1.5 hours. The scope for this C—H amination reaction is very broad and orthogonal to both classical C—C bond forming/reduction sequences and metal nitrene-based C—H amination methods for furnishing this motif. The reaction proceeds in stereochemically dense settings with predictable diastereomeric outcomes, making it well-suited for applications at late-stages of complex molecule synthesis. The streamlining potential of this method is highlighted in the concise and high yielding total synthesis of (+)-allosedridine.

