Ligand Delivery by Design: Strategic use of the diphenyl(4-pyridyl)methyl platform for the synthesis of novel coordination complexes.

We are developing methods for the use of diphenyl(4-pyridyl)methyl azide as a reagent for nitrogen atom-delivery (shown at left). The nitrogen atom is first installed at a uranium center in the form of an imido ligand. Chemical removal of the diphenyl(4-pyridyl)methyl protecting group to reveal a terminal uranium nitrido complex is now being pursued.

In the course of our investigations, we have discovered that diphenyl(4-pyridyl)methyl azide may react through the pyridyl nitrogen as well. This has led to the synthesis and characterization of nitrogen-rich uranium azide complexes (A & B) and a uranium pyridyl complex (C).