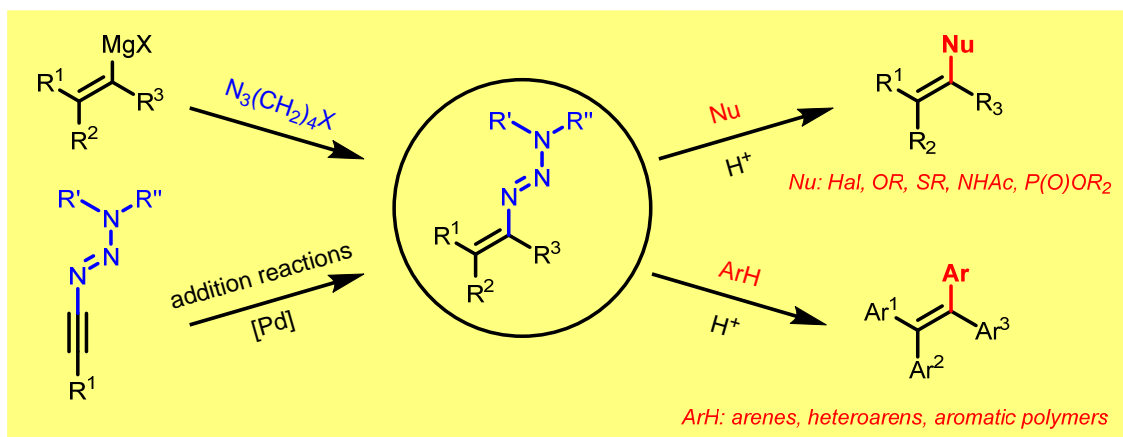


SYNTHESIS AND APPLICATIONS OF VINYL TRIAZENES

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Aryl triazenes are useful reagents in organic synthesis. They are easily available from aryl amines and represent stable precursors for aryl diazonium salts. In contrast, vinyl triazenes cannot be prepared in a similar fashion. Due to the lack of versatile procedures to make them, very little is known about the chemistry of vinyl triazenes.^[1-2] We have developed two convenient routes for the synthesis of vinyl triazenes: a) from Grignard reagents and organic azides,^[3] and b) by Pd-catalyzed addition reactions to alkynyl triazenes.^[4] Upon addition of strong acid, vinyl triazenes efficiently react with variety of heteroatom-based nucleophiles. We have developed a novel route towards tetraarylethene AIE luminogens via metal-free triarylvinylation of aromatic compounds with vinyl triazenes. Scope of the coupling includes simple unactivated arenes, functional arenes, heteroarenes and aromatic polymers.^[5]



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