Desilylative or Decarboxylative Photoadditions with Graphitic Carbon Nitride

**Significance:** A graphitic carbon nitride (g-C₃N₄) catalyzed the desilylative addition of α-silylamines to alkenes or heteroaryl chlorides under visible-light irradiation to give the corresponding adducts in up to 96% yield (eq. 1). g-C₃N₄ also promoted the decarboxylative additions of α-amino acids to alkenes under similar conditions to afford the corresponding products in up to 79% yield (eq. 2).

**Comment:** In the desilylative addition of N-methyl-N-[(trimethylsilyl)methyl]aniline to 4-(2,2-dicyanoethenyl)toluene, g-C₃N₄ was reused eight times without significant loss of its catalytic activity. g-C₃N₄ was applied for the continuous-flow reaction of N-methyl-N-[(trimethylsilyl)methyl]aniline with cyclohexanone to afford the desired amine in 85% yield.

**Desilylative additions:**

![Desilylative Additions Diagram](image)

**Selected results:**

- 92% yield
- 96% yield
- 83% yield
- 88% yield

**Decarboxylative additions:**

![Decarboxylative Additions Diagram](image)

**Selected results:**

- 79% yield
- 71% yield
- 78% yield
- 78% yield