

## Palladium-Catalyzed Unimolecular Fragment Coupling of N-Allylamides via Elimination of Isocyanate

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### Abstract

Transition metal-catalyzed unimolecular fragment coupling (UFC) is defined as processes that forge new chemical bonds through the extrusion of molecules, such as CO and CO<sub>2</sub>, and the subsequent recombination of the remaining fragments. Herein, we report on a new UFC reaction that involves the palladium-catalyzed elimination of an isocyanate fragment from an amide, with the formation of carbon–carbon and carbon–heteroatom bonds. An organometallic intermediate that is relevant to the catalytic reaction was characterized by X-ray crystallography. This UFC reaction enables the late-stage transformation of an amide functionality, allowing amides to be used as a convertible directing or protecting group.

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