Ground-state distortion in *N*-acyl-*tert*-butyl-carbamates (Boc) and *N*-acyl-tosylamides (Ts) : twisted amides of relevance to amide N−C cross-coupling.

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Streszczenie

Amide N–C(O) bonds are generally unreactive in cross-coupling reactions employing low-valent transition metals due to $n_N \rightarrow \pi^*_{C=O}$ resonance. Herein we demonstrate that *N*-acyl-*tert*-butyl-carbamates (Boc) and *N*-acyl-tosylamides (Ts), two classes of acyclic amides that have recently enabled the development of elusive amide bond N–C cross-coupling reactions with organometallic reagents, are intrinsically twisted around the N–C(O) axis. The data have important implications for the design of new amide cross-coupling reactions with the N–C(O) amide bond cleavage as a key step.

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https://www.acs.org/content/acs/en.html