Photolabile Linkers for Solid-Phase Synthesis

Photolabile linkers are the subjects of intense research, because they allow the release of the target molecule simply by irradiation. Photochemical substrate release is often facilitated without additional reagents under mild reaction conditions, which may even be environmentally friendly and appealing in the context of greener chemistry. The mild conditions may, furthermore, become attractive for applications of released crude material in subsequent biological screening experiments, where contamination with cleavage reagents would be detrimental. This review pays attention to the increasing number of photolabile linkers developed for solid-phase synthesis and release. It covers (i) o-nitrobenzyloxy linkers, (ii) o-nitrobenzylamino linkers, (iii) α-substituted o-nitrobenzyl linkers, (iv) o-nitroveratryl linkers, (v) phenacyl linkers, (vi) p-alkoxyphenacyl linkers, (vii) benzoin linkers, (viii) pivaloyl linkers, (ix) other photolabile linkers.

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