

SYNTHESIS OF PHOTOCAGED CARBOHYDRATES

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Caged compounds consist of an effector molecule and a photolabile protecting group, which enables the release of the biologically active substance by irradiation with a particular wavelength. This release ensues with high spatiotemporal resolution, rendering the photolabile protecting groups not only beneficial for orthogonal deprotection in synthesis but also a crucial optogenetic tool for neurochemical and biophysical examinations. Their photochemical and biological properties depend on the attributes of the photolabile protecting group and the linked effector molecule [1-3]. Our investigations focus upon the modification of the photolabile protecting group and in addition to it on the various types of biological effector molecules, giving us access to a large library of photocaged carbohydrates. This versatile toolbox was employed for a variety of synthetic biological and biotechnological applications [4-6].

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