UV and Near-IR Triggered Release from Polymeric Nanoparticles

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A new light-sensitive polymer containing multiple light-sensitive triggering groups along the backbone and incorporating a quinone-methide self-immolative moiety was developed and formulated into nanoparticles encapsulating a model pharmaceutical Nile Red. Triggered burst release of the payload upon irradiation and subsequent degradation of the nanoparticles were observed. This system is designed to be versatile where the triggering group can be sensitive to a number of wavelengths.

Figure 1. An illustration of the nanoparticles, their degradation, and light-triggered release of their encapsulated payload.


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