Design of a multifunctional and biodegradable graphene-based material for cancer therapy

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Carbon and 2D nanomaterials are showing very promising results in the biomedical field. They are explored for many biomedical applications, particularly for cancer treatment, due to their unique physicochemical characteristics. In this presentation, I will describe the characteristics of biodegradability and illustrate how an appropriate chemical modification of these nanomaterials render them more biocompatible and can accelerate their biodegradability. I will focus in particular on our recent results aiming to design a smart multifunctional graphene platform able to both selectively deliver a drug into cells in a targeted manner and displaying an enhanced propensity for enzymatic degradation.