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# A novel nanotheranostic agent for dual-mode imaging-guided cancer therapy based on europium complexes-grafted-oxidative dopamine

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## ABSTRACT

A simple method is presented for the preparation of novel europium complexes-grafted-oxidative dopamine (ECOD) nanoparticles with uniform sizes (ca. 220 nm), as a high-performance nanotheranostic agent guided by X-ray computed tomography (CT) and photoluminescence (PL). Here, an oxidative dopamine precursor with a rough surface is first prepared by copper (II) ionic catalysis. Then, europium complexes are successfully grafted onto the oxidative dopamine precursor by surface-initiated atom transfer radical polymerization (ATRP). Interestingly, as the

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