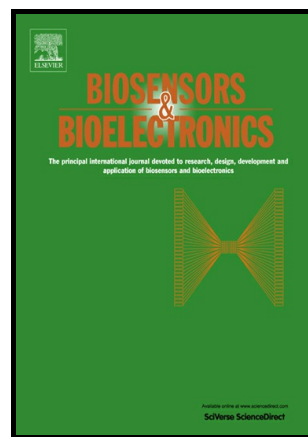


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A new fluorescent probe with a large turn-on signal for imaging nitroreductase in tumor cells and tissues by two-photon microscopy

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ABSTRACT

Hypoxia is the important characteristic of solid tumors, and it may cause the bioactivity of nitroreductase (NTR) to display an elevated level. Hence, the development of effective monitoring methods of NTR in living systems is of great importance for detecting the occurrence and progress of tumors. Toward this goal, a novel two-photon fluorescence turn-on NTR probe **GCTPOC-HY**, based on the two-photon platform **GCTPOC** and the NTR recognition site *p*-nitrobenzyl ether, is designed and synthesized. The probe **GCTPOC-HY** exhibits eminent properties such as high sensitivity and selectivity, highly stable photo-stability, and low cytotoxicity. Besides, the probe responds to 1.5 $\mu\text{g/mL}$ NTR with a 130-fold fluorescence

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