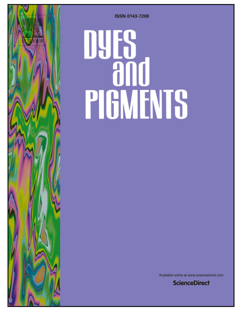

A fluorescent probe for imaging hydrogen peroxide in ovarian cancer cells

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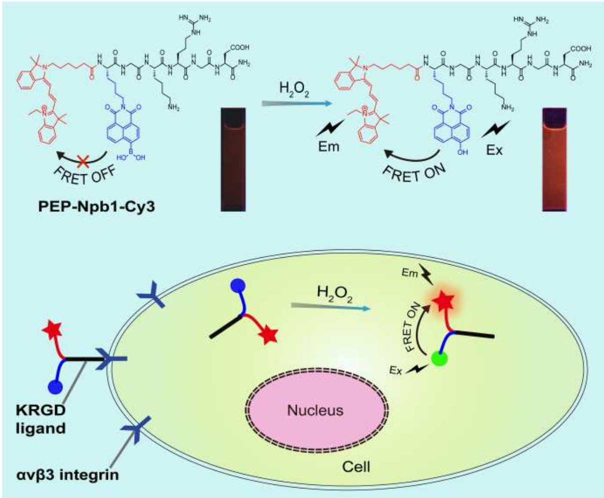
Graphical Abstract:



Here, we have developed a fluorescence resonance energy transfer (FRET)-based PEP-Npb1-Cy3 probe employing oxide reactivity of 1, 8-naphthalimide boric acid towards H_2O_2. The probe yields a turn-on fluorescence signal and exhibits high sensitivity for H_2O_2. The probe incorporated KRGD to enable the overall molecule to have adequate polarity for application in water as well as the capability to be efficiently taken up by ovarian cancer cells based on a $\alpha_v\beta_3$ integrin receptor targeting mechanism.