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A ratiometric fluorescent probe for aluminum ions based-on monomer/excimer conversion and its applications to real samples

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Abstract:

Excessive amount of aluminum is detrimental to growing plants or animals and people are likely to suffer from various diseases upon long-term exposure to aluminum ions. Therefore, sensitive and selective detection of trace amounts of Al³⁺ in real samples is of great importance. Herein, a ratiometric fluorescent probe for detecting aluminum ions based on pyrene-1-butyric acid (Py-L-COOH) was developed, which function via monomer/excimer conversion. In the presence of Al³⁺,

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