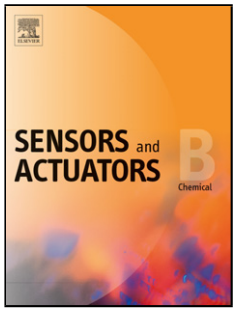

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Turn-on fluorescent probe-encapsulated micelle as colloidally stable nano-chemosensor for highly selective detection of Al^{3+} in aqueous solution and living cell imaging

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Highlights

1. Hydrophobic fluorescent probe was encapsulated in DSPE-PEG nano micelles.
2. DSPE-PEG-Dye was colloidally stable in pure water and cell culture medium.
3. DSPE-PEG-Dye was used for selective Al^{3+} detection and intracellular imaging.

Abstract: It is well known that high amount of aluminum ion are not only detrimental to plant growth but also threat to our health. Most of fluorescent chemosensors for the detection Al^{3+} suffer from some restrictions, such as poor selectivity, indifferent sensitivity, inferior stability in biological fluids, and being unsuitable for the applications in aqueous environment and biological systems. To address the above