

# European Chemistry Congress

June 16-18, 2016 Rome, Italy

## Signaling of Hg(II) ions by reaction-based probes based on deprotection of dithiane

In Jung Chang, Keum Saem Hwang and Suk-Kyu Chang  
Chung-Ang University, Republic of Korea

A new reaction-based probe for the fluorescence signaling of Hg<sup>2+</sup> ions using dithiane derivative of ESIPT probe has been investigated. Probe showed prominent off-on type fluorescence signaling behaviour towards Hg<sup>2+</sup> ions in aqueous DMSO solution. The interfering response of Cu<sup>2+</sup> ions was efficiently removed by using a citrate buffer as a masking agent. By using citrate buffer, the selective signaling behaviour is not affected by the presence of other metal ions that are usually present in environmental samples. Hg<sup>2+</sup> ions signaling by a large fluorescence enhancement (66-fold) was possible with a detection limit of  $1.8 \times 10^{-7}$  M. As a test of a practical use for the designed probe, we created a test strip that could be used to detect Hg<sup>2+</sup> ions in aqueous solution.

### Biography

In Jung Chang obtained his Bachelor's degree from the department of chemistry at Chung-Ang University in 2015. She is currently a master student in the department of chemistry at the same University. Her research field is design of chemical probes for metal ions and anions. Her research interest is development of chromogenic and fluorogenic chemosignaling probes.

[natalie61@naver.com](mailto:natalie61@naver.com)

### Notes: