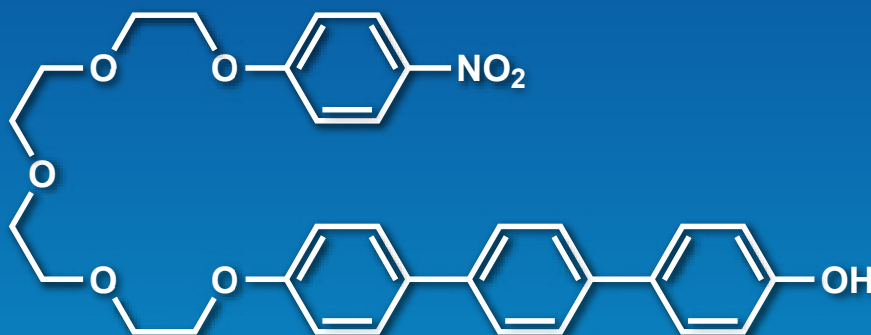


Fluorescent Probe for Visualizing Trace Amount of Cesium

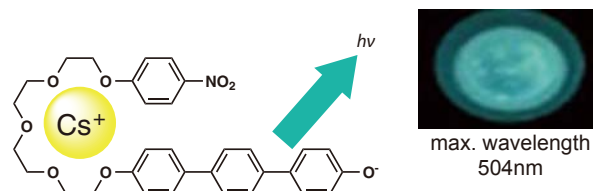
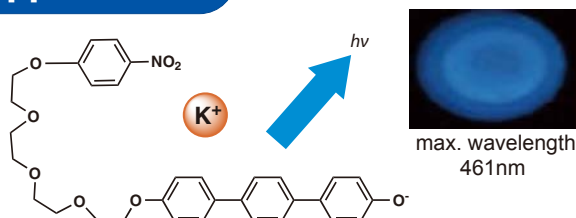


Cesium Green
[C2806]

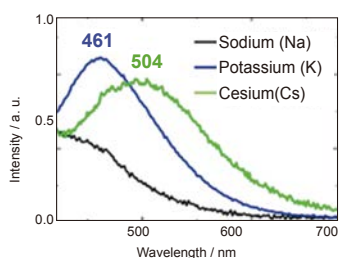
Advantage

Micrometer-level naked-eye detection of cesium particulates in the state

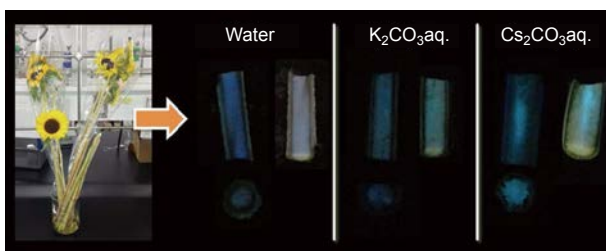
Applications



The complex structures and fluorescence properties of **C2806** with K^+ or Cs^+ (UV irradiation (365 nm) after addition of a drop of methanol)



Fluorescence spectra of a mixture of **C2806** with alkali metals. (Numbers indicate the wavelength of the fluorescence maximum.)



The photographs show distribution of K^+ and Cs^+ in freeze-dried sunflower stem cross sections under UV irradiation (365 nm). (image on the left: spraying only with methanol, images on the right: spraying with **C2806** in methanol)

*Images and data courtesy of the National Institute for Material Science

T. Mori, M. Akamatsu, K. Okamoto, M. Sumita, Y. Tateyama, H. Sakai, J. P Hill, M. Abe, K. Ariga, *Sci Technol. Adv. Mater.* **2013**, *14*, 015002. National Institute for Material Science, JP Patent 6048823 B, **2016**.

Cesium Green

50mg / 250mg [C2806]

This product is obtained permission from National Institute for Material Science, Japan and was commercialized under instruction by Dr. Katsuhiko Ariga.

Fluorescent Probe for Visualizing Trace Amount of Cesium

Protocol for Naked-eye Detection of Cesium Particulates with C2806

1. Visualization of cesium ion in a solid state

A 0.02 wt% methanol solution of C2806 is prepared.
This solution is dropped on Cs₂CO₃ particles.
Green fluorescence emission is observed by UV irradiation (365nm).

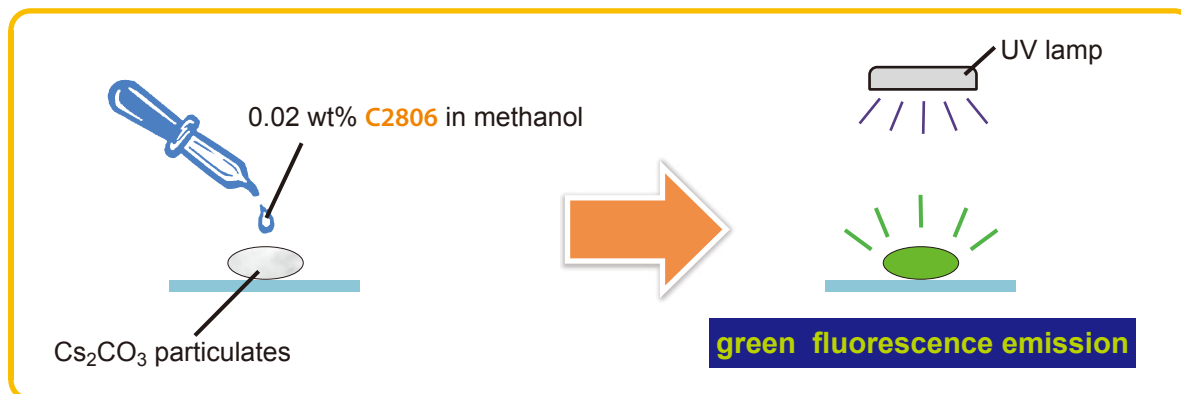


Fig.1 Visualization of cesium ion in a solid state

2. Visualization of cesium ion in plants

A sunflower stem is immersed in an aqueous solution of Cs₂CO₃ (1 wt%) for a few days to absorb cesium ion. It is freeze-dried and the cross section of it is sprayed with a methanol solution of C2806. Green fluorescence emission is observed only at the part of stem where cesium ion is taken by UV irradiation (365nm).

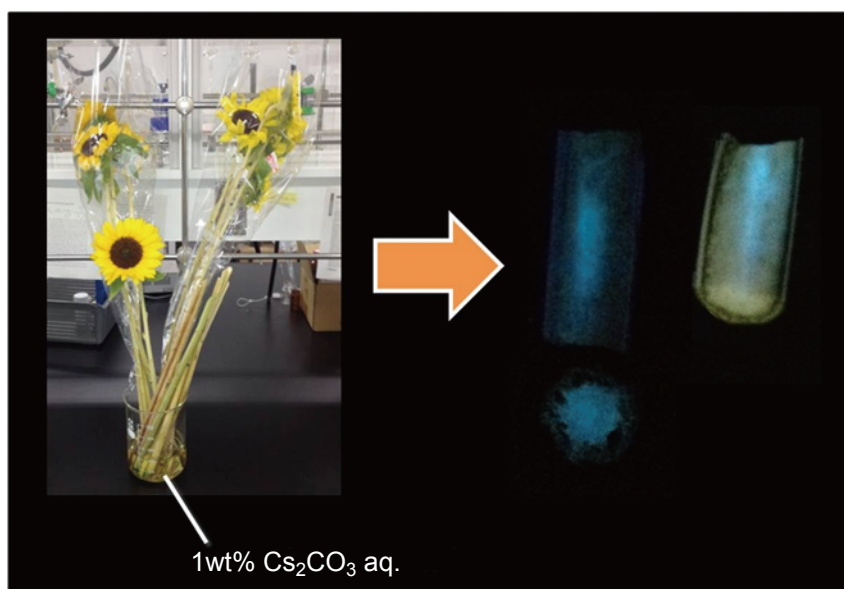


Fig.2 Visualization of cesium ion in plants

Ordering and Customer Service

TCI AMERICA

Tel : 800-423-8616 / 503-283-1681
Fax : 888-520-1075 / 503-283-1987
E-mail : Sales-US@TCIchemicals.com

TCI EUROPE N.V.

Tel : +32 (0)3 735 07 00
Fax : +32 (0)3 735 07 01
E-mail : Sales-EU@TCIchemicals.com

TCI Deutschland GmbH

Tel : +49 (0)6196 64053-00
Fax : +49 (0)6196 64053-01
E-mail : Sales-DE@TCIchemicals.com

Tokyo Chemical Industry UK Ltd.

Tel : +44 (0)1865 784560
Fax : +44 (0)1865 784561
E-mail : Sales-UK@TCIchemicals.com

TCI Chemicals (India) Pvt. Ltd.

Tel : 1800 425 7889 / 044-2262 0909
Fax : 044-2262 8902
E-mail : Sales-IN@TCIchemicals.com

梯希爱(上海)化成工业发展有限公司

Tel : 800-988-0390 / 021-67121386
Fax : 021-6712-1385
E-mail : Sales-CN@TCIchemicals.com

TOKYO CHEMICAL INDUSTRY CO., LTD.

Tel : +81 (0)3-5640-8878
Fax : +81 (0)3-5640-8902
E-mail : globalbusiness@TCIchemicals.com

Availability, price or specification of the listed products are subject to change without prior notice. Reproduction forbidden without the prior written consent of Tokyo Chemical Industry Co., Ltd.