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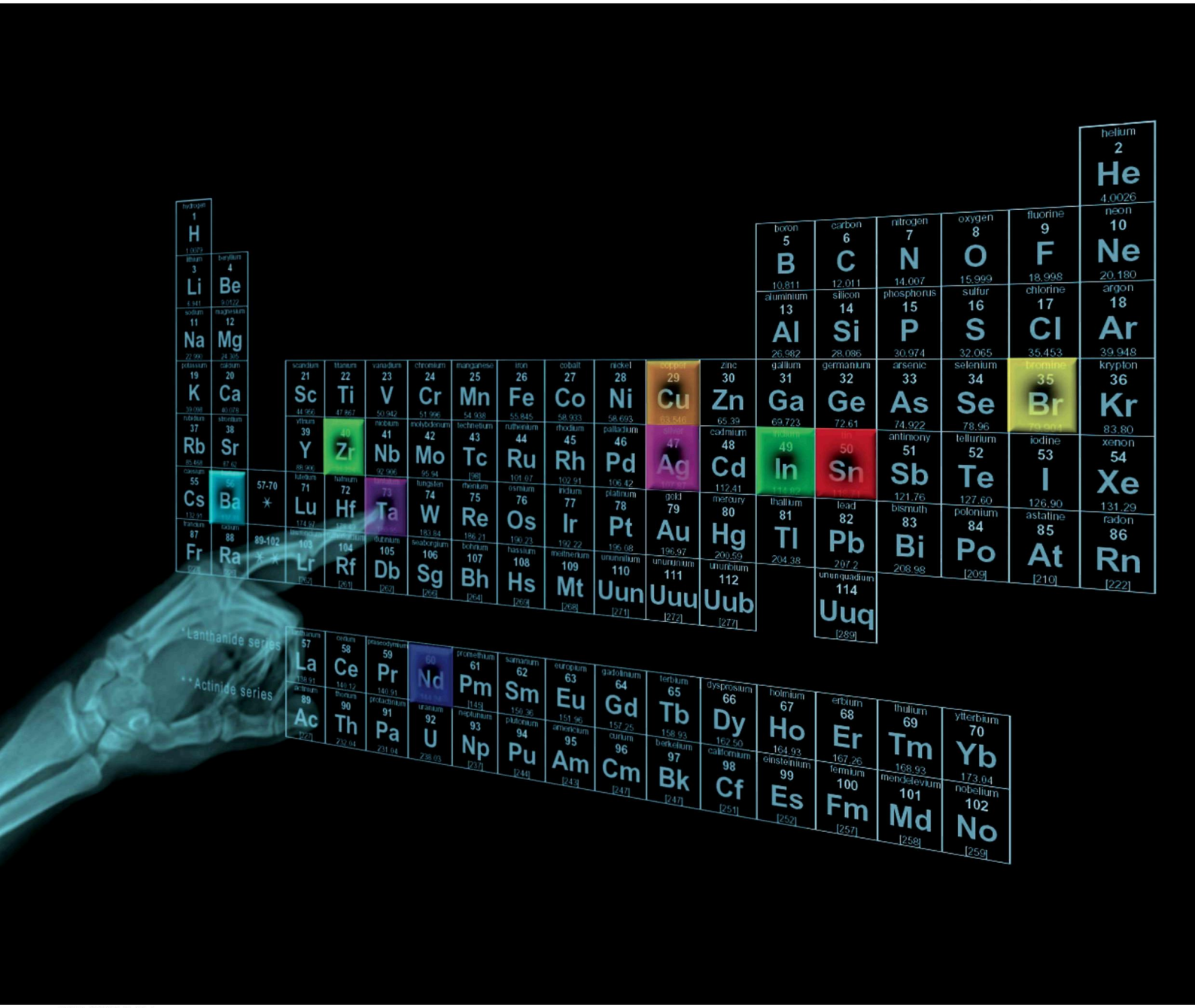

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COMMUNICATION

Simon D. M. Jacques *et al.*

A laboratory system for element specific hyperspectral X-ray imaging

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Cover
See Simon D. M. Jacques *et al.*, pp. 755–759.
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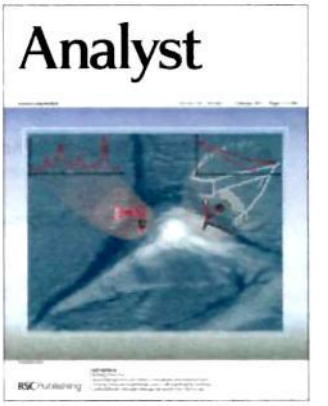

Inside cover
See Anhong Zhou *et al.*, pp. 787–797.
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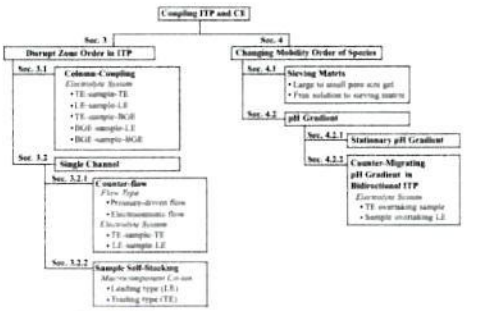
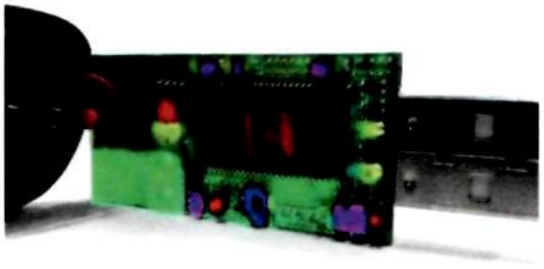
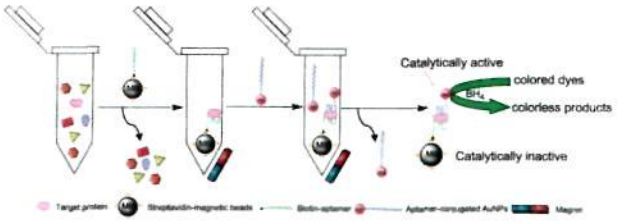
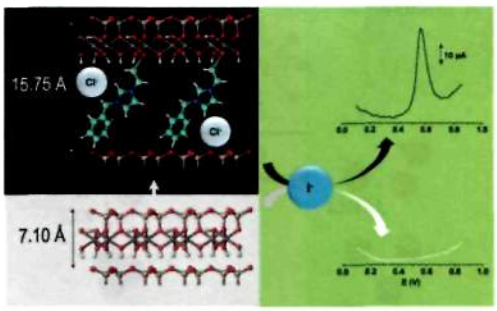
EDITORIAL

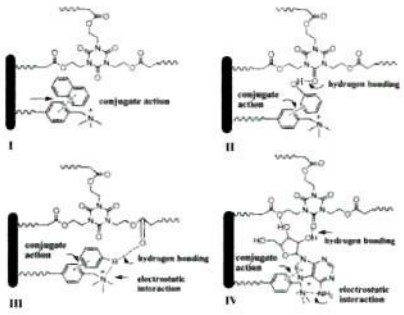
TUTORIAL REVIEW

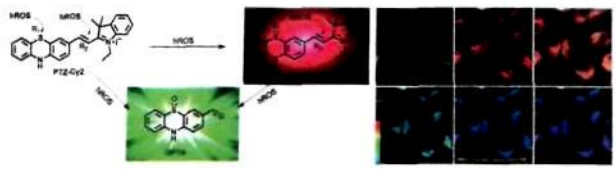








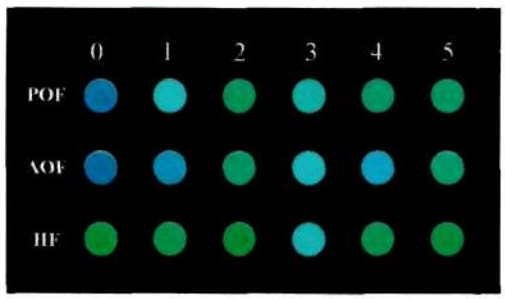




A novel fluorescent sensor for detection of highly reactive oxygen species, and for imaging such endogenous hROS in the mitochondria of living cells

Fei Liu, Tong Wu, Jianfang Cao, Hua Zhang, Mingming Hu, Shiguo Sun, Fengling Song, Jiangli Fan, Jingyun Wang* and Xiaojun Peng*

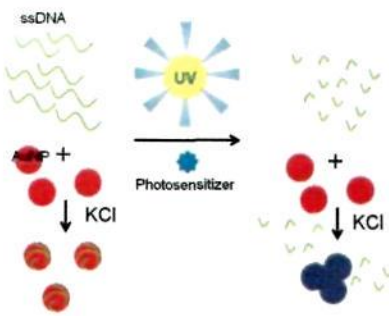
PTZ-Cy2 serves both as an absorbance ratiometric and a fluorescent "off–on" sensor for detecting hROS and gives a highly sensitive response to such endogenous species within the mitochondria of living cells.



Utilizing modified flavonoids to construct a chemodosimeter array for discrimination of different palladium species by using principal component analysis

Yanxue Wang, Bin Liu,* Jiao Tian, Qianbiao Li, Fanfan Du, Taisheng Wang and Ruke Bai*

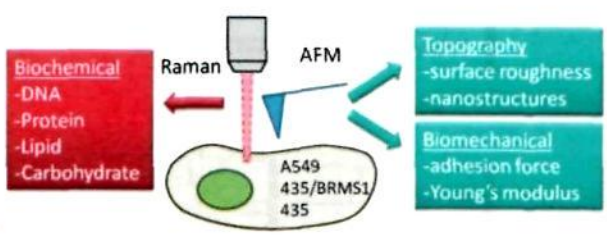
A simple chemodosimeter array has been successfully achieved for the detection and discrimination of different palladium species by using principal component analysis.



Colorimetric detection of UV light-induced single-strand DNA breaks using gold nanoparticles

Joong Hyun Kim, Chan Ho Chung and Bong Hyun Chung*

Salt-induced aggregation of gold nanoparticles was dependent on the size of single-strand DNA. As a result, breaking of the ss DNA by a photosensitizer under UV light irradiation could be detected by observing a red-to-purple color change of gold nanoparticles.



Subcellular spectroscopic markers, topography and nanomechanics of human lung cancer and breast cancer cells examined by combined confocal Raman microspectroscopy and atomic force microscopy

Gerald D. McEwen, Yangzhe Wu, Mingjie Tang, Xiaojun Qi, Zhongmiao Xiao, Sherry M. Baker, Tian Yu, Timothy A. Gilbertson, Daryll B. DeWald and Anhong Zhou*

Novel application of Raman and AFM for the analysis of single cell mechanics, cytoarchitectures, and biochemical components of cancer cells.