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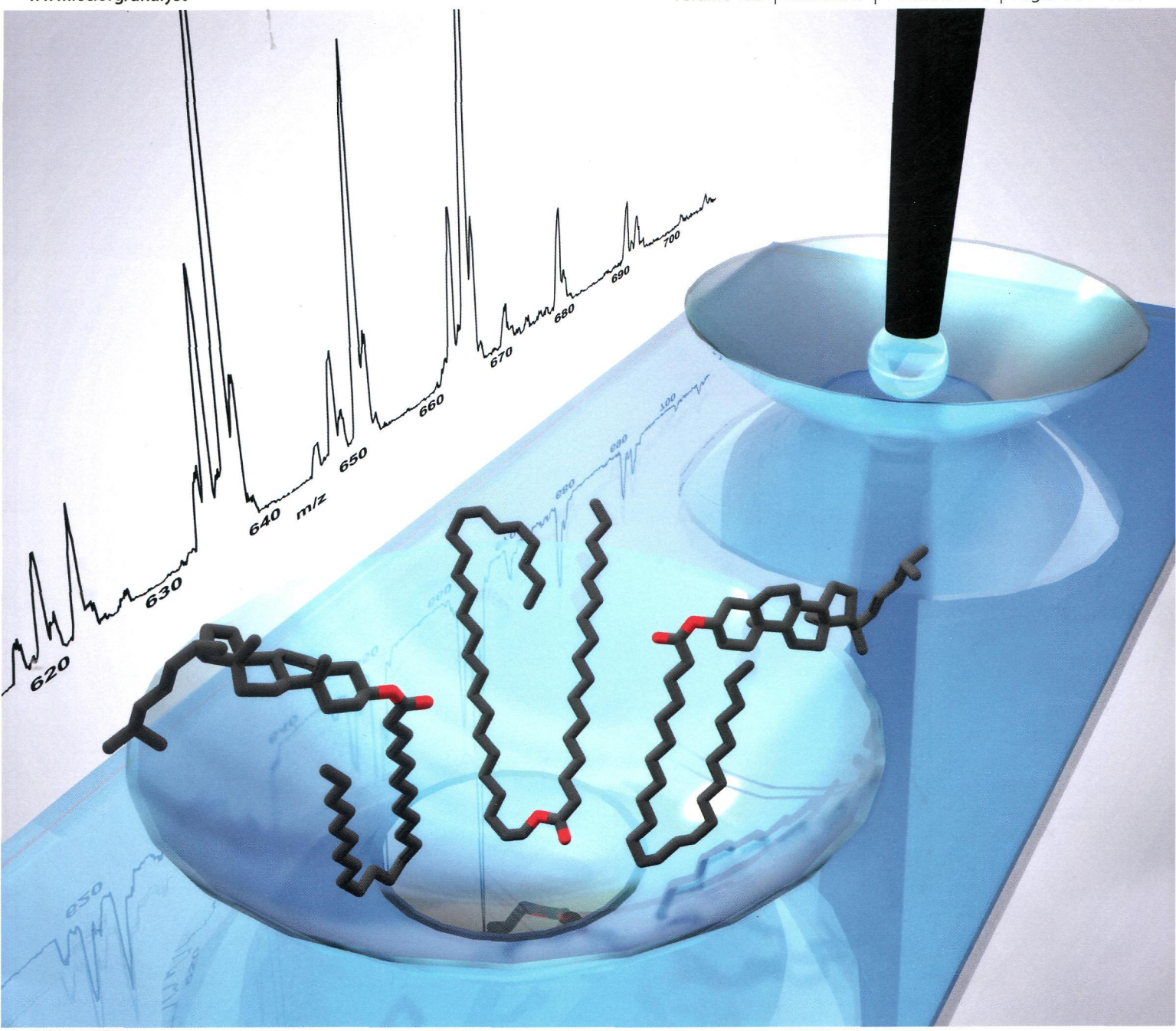

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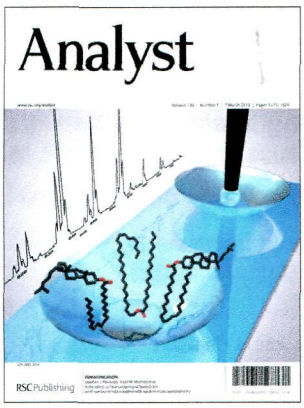
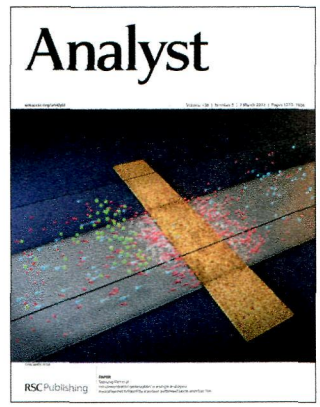
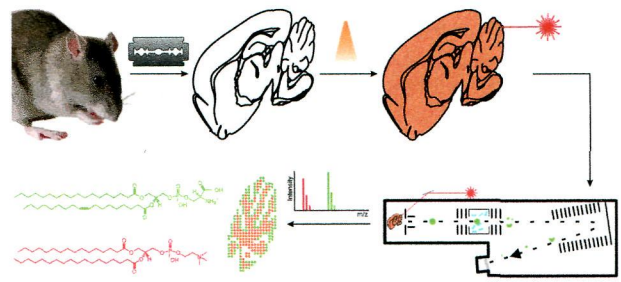


Cover
See Stephen J. Blanksby, Todd W. Mitchell *et al.*, pp. 1316–1320.
Image reproduced by permission of Todd Mitchell from *Analyst*, 2013, **138**, 1316.

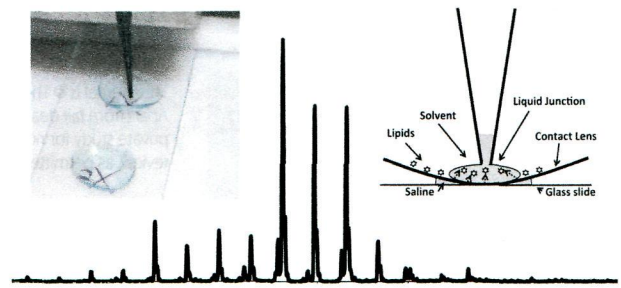


Inside cover
See Taesung Kim *et al.*, pp. 1370–1378.
Image reproduced by permission of Taesung Kim from *Analyst*, 2013, **138**, 1370.

CRITICAL REVIEW



COMMUNICATIONS

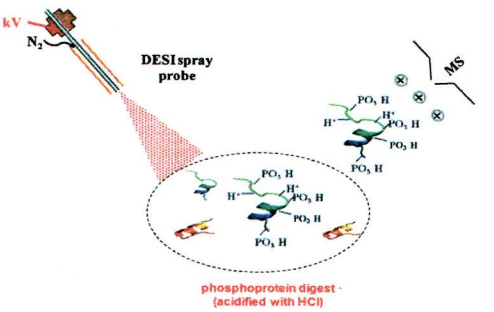


1321

Highly efficient ionization of phosphopeptides at low pH by desorption electrospray ionization mass spectrometry

Ning Pan, Pengyuan Liu, Weidong Cui, Bo Tang, Jingmin Shi and Hao Chen*

A fast and novel DESI-MS method is developed for effective ionization of phosphopeptides in complicated mixtures.

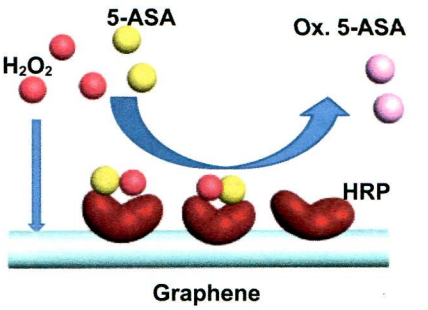


1325

Electrical, enzymatic graphene biosensing of 5-aminosalicylic acid

Pratima Labroo and Yue Cui*

We report an electrical biosensing of 5-aminosalicylic acid based on a peroxidase-immobilized graphene sensor.

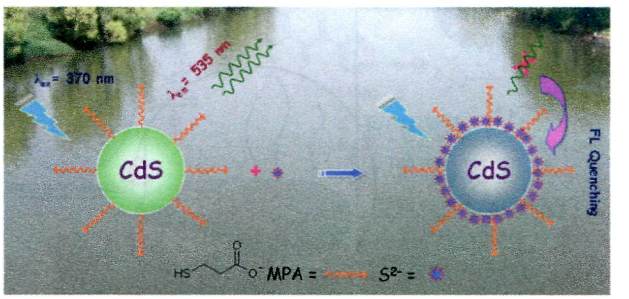


1329

Direct detection of sulfide ions [S^{2-}] in aqueous media based on fluorescence quenching of functionalized CdS QDs at trace levels: analytical applications to environmental analysis

Anil H. Gore, Sandip B. Vatre, Prashant V. Anbhule, Sung-Hwan Han, Shivajirao R. Patil and Govind B. Kolekar*

We report functionalized CdS QDs as a novel fluorescent probe for highly selective and ultrasensitive detection of S^{2-} from environmental water samples without pretreatment.

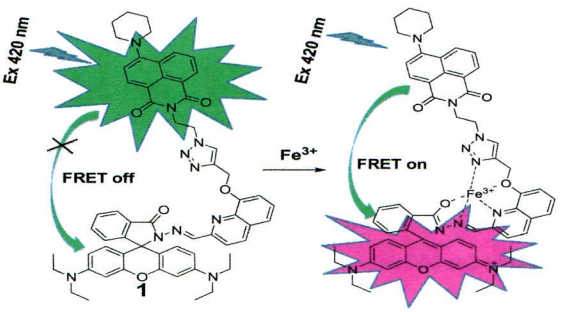


1334

A highly selective and efficient single molecular FRET based sensor for ratiometric detection of Fe^{3+} ions

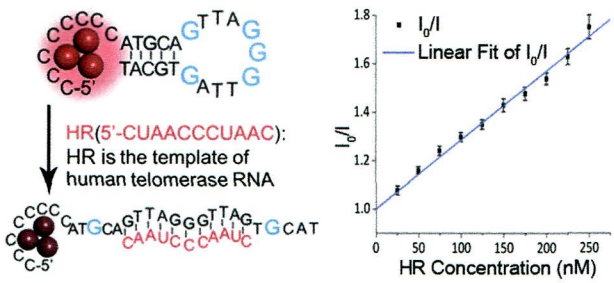
Narendra Reddy Chereddy, Sathiah Thennarasu* and Asit Baran Mandal*

A selective and efficient FRET based sensor for the ratiometric detection of Fe^{3+} in aqueous and biological samples is presented.



COMMUNICATIONS

1338

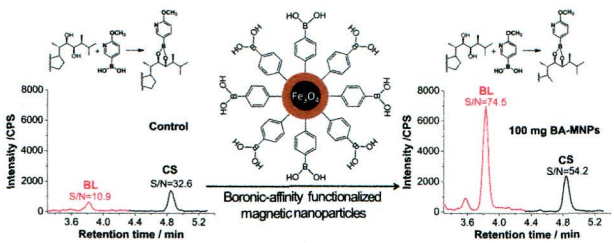


Luminescent silver nanoclusters anchored by oligonucleotides detect human telomerase ribonucleic acid template

Yueteng Wei, Ru Liu, Zhipeng Sun, Yaling Wang, Yanyan Cui, Yuliang Zhao, Zhifang Cai and Xueyun Gao*

A luminescent Ag nanoclusters-DNA probe is synthesized for potential application in human telomerase detection.

1342

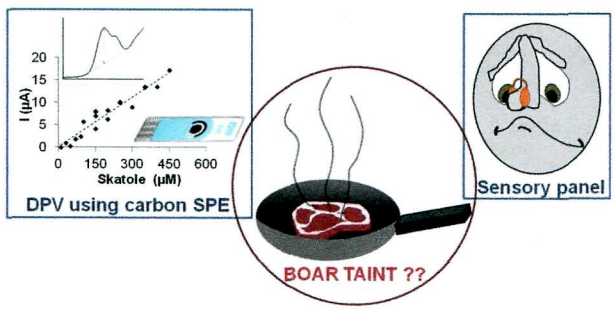


A dual role of boronate affinity in high-sensitivity detection of vicinal diol brassinosteroids from sub-gram plant tissues *via* UPLC-MS/MS

Peiyong Xin, Jijun Yan, Jinshi Fan, Jinfang Chu* and Cunyu Yan*

A dual role of boronate affinity highly improved the detection sensitivity of vicinal diol brassinosteroids from sub-gram plant tissues.

1346



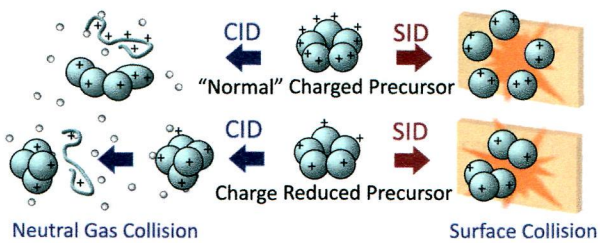
Voltammetric discrimination of skatole and indole at disposable screen printed electrodes

José-María Maesa, Francesc-Xavier Muñoz-Pascual and Eva Baldrich*

Effective discrimination of skatole and indole by differential pulse voltammetry at cheap and disposable screen printed electrodes.

PAPERS

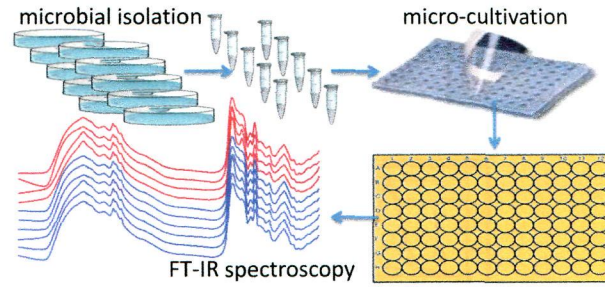
1353

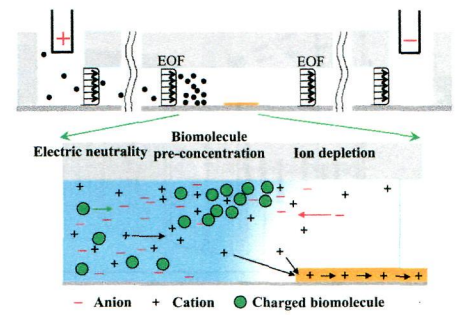


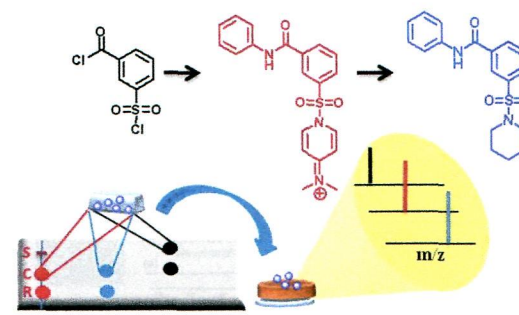
Impact of charge state on gas-phase behaviors of noncovalent protein complexes in collision induced dissociation and surface induced dissociation

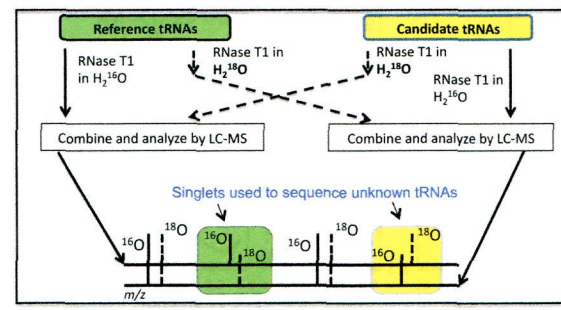
Mowei Zhou, Shai Dagan and Vicki H. Wysocki*

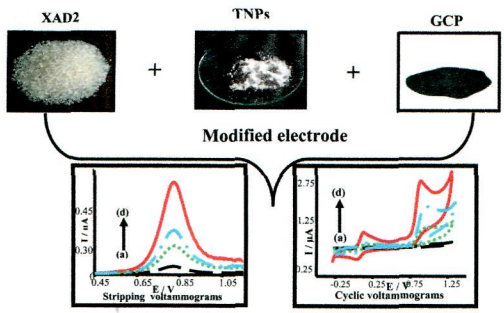
Unique information from surface collisions of gas-phase charge-tuned protein complexes adds to the current understanding from activation by gas collisions.







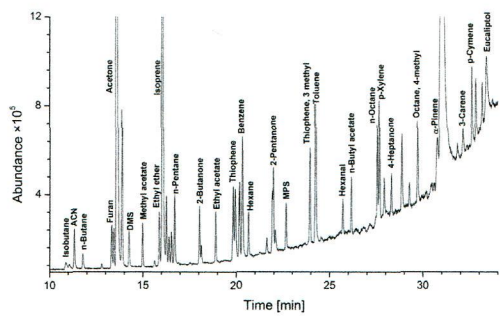




Adsorptive stripping voltammetric determination of imipramine, trimipramine and desipramine employing titanium dioxide nanoparticles and an Amberlite XAD-2 modified glassy carbon paste electrode

Bankim J. Sanghavi and Ashwini K. Srivastava*

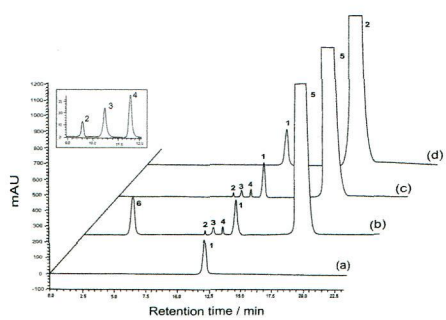
Synergistic effect of Amberlite XAD2 and TiO2 nanoparticles in a glassy carbon paste electrode has led to a very sensitive determination of imipramine, trimipramine and desipramine in pharmaceuticals, blood serum and urine samples.



Stability of selected volatile breath constituents in Tedlar, Kynar and Flexfilm sampling bags

Paweł Mochalski,* Julian King, Karl Unterkofler and Anton Amann

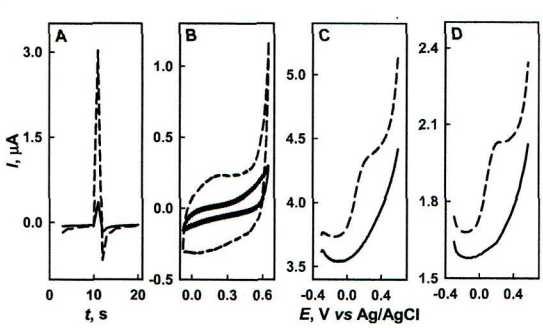
The stability of 41 selected breath constituents in three types of polymer sampling bags, Tedlar, Kynar, and Flexfilm, was investigated using solid phase microextraction and gas chromatography mass spectrometry.



Assessment of recombinant human parathyroid hormone: correlation of LC methods with bioassays

Fernanda P. Stamm, Guilherme Z. Calegari, Guilherme W. de Freitas, Ricardo B. Souto, Larissa P. Porto, Clóvis D. A. Cardoso Jr. and Sérgio L. Dalmora*

Reversed-phase liquid chromatography (RP-LC) and size exclusion liquid chromatography (SE-LC) methods were validated for the assessment of recombinant human parathyroid hormone (rhPTH 1-34).



Determination of antibodies against human growth hormone using a direct immunoassay format and different electrochemical methods

Natalija German, Asta Kausaite-Minkstimiene, Justina Kirlyte, Asta Makaraviciute, Arunas Ramanavicius, Lina Mikoliunaite and Almira Ramanaviciene*

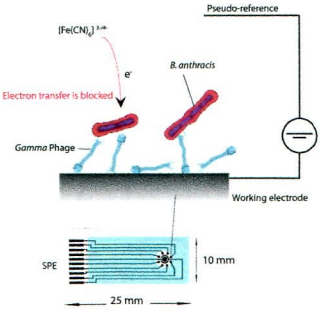
The highest sensitivities of developed immunosensors were achieved using pulse amperometry and cyclic voltammetry, while differential pulse and square wave voltammetries were less informative for direct label free detection of antibodies.

1434

Carbon microarrays for the direct impedimetric detection of *Bacillus anthracis* using *Gamma* phages as probes

Arghavan Shabani, Christophe A. Marquette,* Rosemonde Mandeville and Marcus F. Lawrence

A direct and efficient impedimetric method is presented for the detection of *Bacillus anthracis Sterne* vegetative cells, using *Gamma* phages as probes attached to screen-printed carbon electrode microarrays.

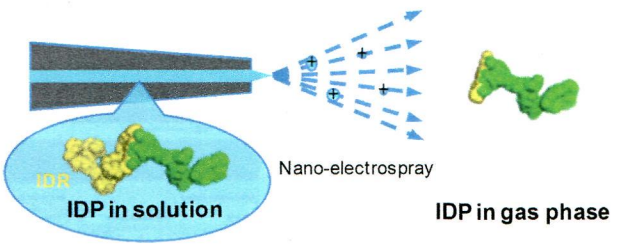


1441

Characterisation of an intrinsically disordered protein complex of Swi5–Sfr1 by ion mobility mass spectrometry and small-angle X-ray scattering

Kazumi Saikusa, Naoyuki Kuwabara, Yuichi Kokabu, Yu Inoue, Mamoru Sato, Hiroshi Iwasaki, Toshiyuki Shimizu, Mitsunori Ikeguchi and Satoko Akashi*

Extreme compaction of ID regions in the gas phase was experimentally identified by the combination of IM-MS and SAXS.

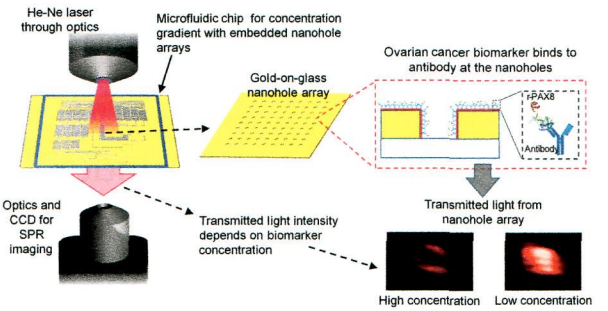


1450

Quantification of ovarian cancer markers with integrated microfluidic concentration gradient and imaging nanohole surface plasmon resonance

Carlos Escobedo, Yu-Wei Chou, Mohammad Rahman, Xiaobo Duan, Reuven Gordon, David Sinton, Alexandre G. Brolo and Jacqueline Ferreira*

Nanohole arrays are integrated into a microfluidic gradient generator for detection of ovarian cancer biomarkers *via* SPR imaging.

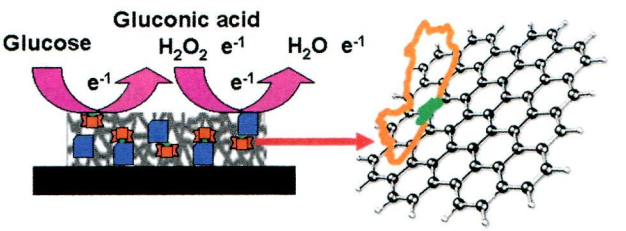


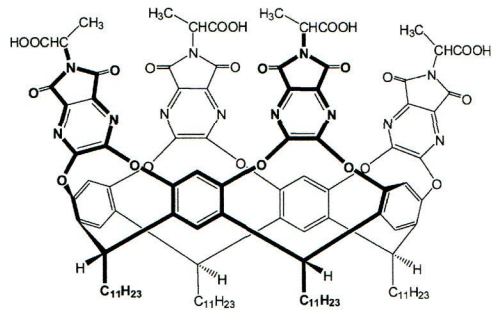
1459

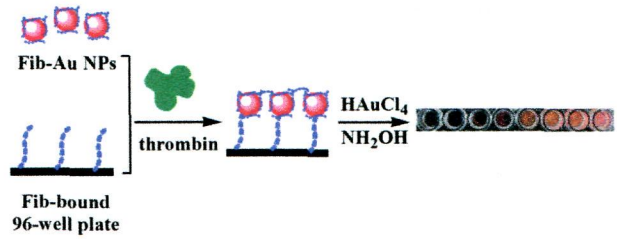
A novel platform for enhanced biosensing based on the synergy effects of electrospun polymer nanofibers and graphene oxides

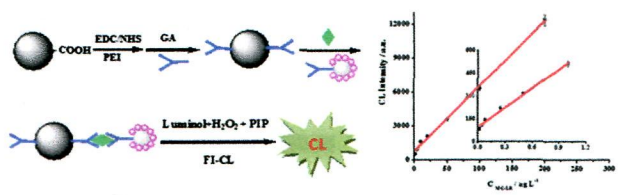
Xiaofang Su, Jun Ren,* Xianwei Meng,* Xiangling Ren and Fangqiong Tang*

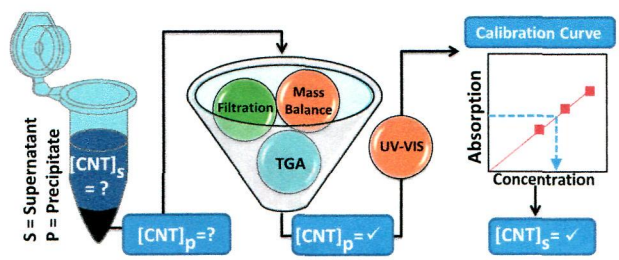
The efficient biosensing of glucose was achieved *via* the synergy effects of graphene oxides and electrospun polymer nanofibers.

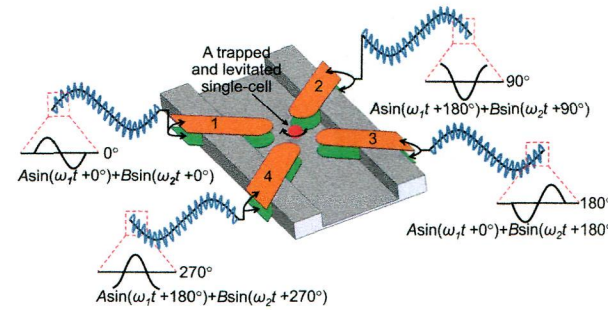


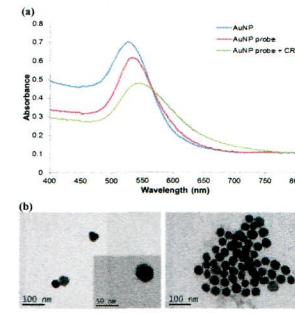


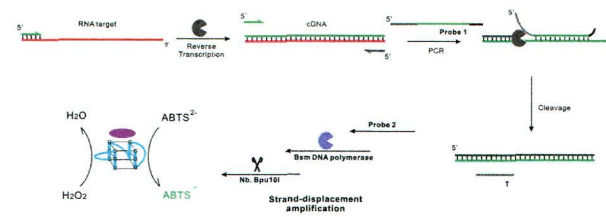


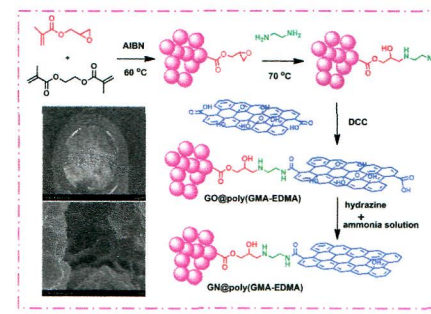












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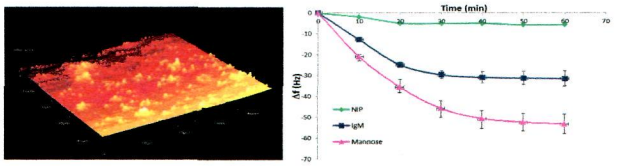
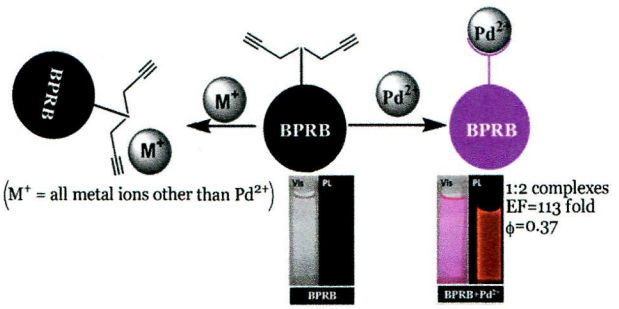


New synthesis method for 4-MAPBA monomer and using for the recognition of IgM and mannose with MIP-based QCM sensors

Sibel Emir Diltemiz, Deniz Hür, Rüstem Keçili, Arzu Ersöz and Rıdvan Say*

Quartz crystal microbalance (QCM) sensors coated with molecularly imprinted polymers (MIP) have been developed for the recognition of immunoglobulin M (IgM) and mannose.

1564

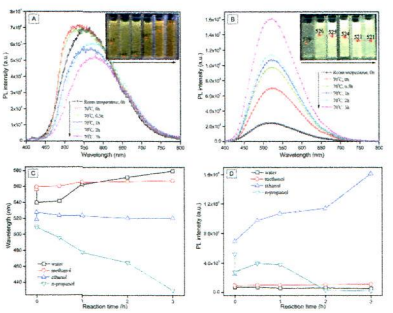


A depropargylation-triggered fluorescence "turn-on" probe for the detection of Pd^{2+} based on a bispropargylamine–rhodamine conjugate

Rathinam Balamurugan, Chih-Chieh Chien, Kai-Ming Wu, Yi-Hong Chiu and Jui-Hsiang Liu*

A bis-propargyl-appended-rhodamine B-based receptor **BPRB** has been synthesized that exhibits pronounced fluorescence enhancement in the presence of Pd^{2+} ions over a range of other metal ions.

1570

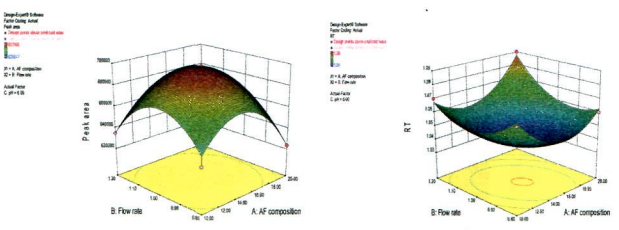


Comparative study on CdSe QDs synthesized from water and ethanol: Hydrogen bond induced particle agglomeration and enhancement on photoluminescence

Weiguo Tian, Wen Mi, Jintao Tian,* Jinqian Jia, Xiaoyun Liu, Zhibin Zhu, Jinhui Dai and Xin Wang

In this paper a comparative study is carried out on the CdSe QDs synthesized from water and ethanol.

1581



Development and validation of LC–MS/MS method for the quantitation of lenalidomide in human plasma using Box–Behnken experimental design

M. Saquib Hasnain,* Shireen Rao, Manoj Kr Singh, Nitin Vig, Amit Gupta, Abdulla Ansari, Pradeep Sen, Pankaj Joshi and Shaukat Ali Ansari

Ultra-fast stability indicating LC–MS/MS method for the determination of lenalidomide using carbamazepine.