

# Analytical Methods

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## IN THIS ISSUE

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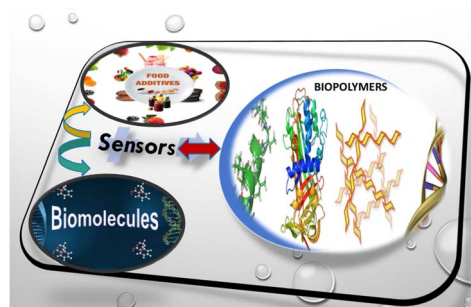
See Ana L. Daniel-da-Silva *et al.*, pp. 2905–2914. Image reproduced by permission of Maria Ant3nio from *Anal. Methods*, 2023, 15, 2905. This cover has been designed using assets from Freepik.com.

## CRITICAL REVIEW

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### Biopolymer supported electroanalytical methods for the determination of biomolecules and food additives – a comprehensive perspective

Rejithamol Rajamani,\* Devu C., Sreelekshmi P. J., Devika V., Agraja P. S., Maheswari K. and Vedhanarayanan Balaraman

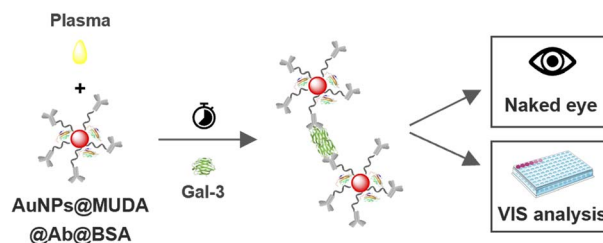


## PAPERS

2905

### Gold nanoparticle probes for colorimetric detection of plasma galectin-3: a simple and rapid approach

Maria Ant3nio, T3nia Lima, Rita Ferreira, Margarida Fardilha, Jos3 Mesquita Bastos, Rui Vitorino and Ana L. Daniel-da-Silva\*



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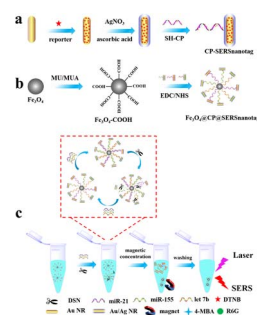
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## Quantitative SERS detection of multiple breast cancer miRNAs based on duplex specific nuclease-mediated signal amplification

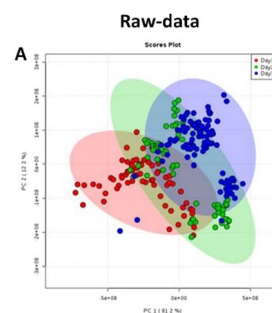
Wei Xu,\* Yu Zhang, Dianhai Hou, Jianjun Shen, Jinhua Dong, Zhiqin Gao\* and Honglin Liu\*



2925

## Advantages of using biologically generated $^{13}\text{C}$ -labelled multiple internal standards for stable isotope-assisted LC-MS-based lipidomics

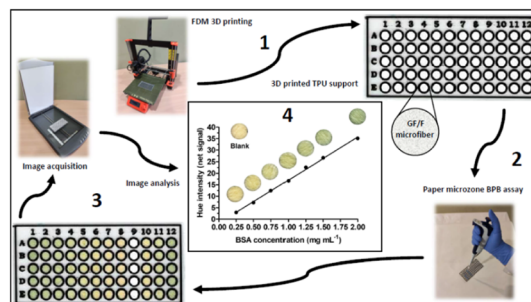
Malak A. Jaber, Bruna de Falco, Salah Abdelrazig, Catharine A. Ortori, David A. Barrett and Dong-Hyun Kim\*



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## Paper microzone assay embedded on a 3D printed support for colorimetric quantification of proteins in different biological and food samples

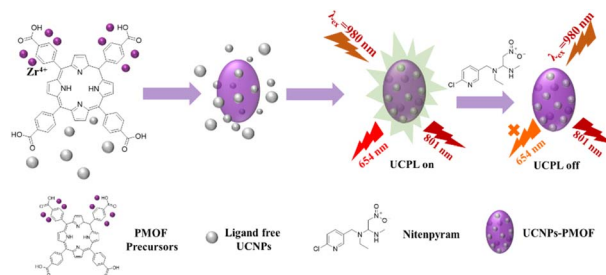
Francesca Pettinau,\* Barbara Pittau and Alessandro Orrù\*



2946

## An upconverted nanoparticle–porphyrin metal–organic framework platform for near-infrared detection of nitenpyram

Xiong Chen, Yingxue Li, Juying Li, Li Cao and Cheng Yao\*



[illegible]

Gulshan Verma, Saloni Singhal, Prince Kumar Rai  
and Ankur Gupta\*

Gulshan Verma, Saloni Singhal, Prince Kumar Rai  
and Ankur Gupta\*

The diagram illustrates the CE-LIF method for detecting flavonoids. On the left, a box lists five flavonoids with their chemical structures: Kempferol, Galangin, Isoflavone, Quercetin, and Quercetin. Two pathways are shown: 1) 'NaAC derivatization' leading to 'Fluorescence enhancement' and a sharp, high-intensity peak. 2) 'Without derivatization' leading to a broad, low-intensity peak. The resulting peaks are labeled: Aster (red), Galangin (yellow), Chamaecrista (blue), Tangerine peel (green), and Cuscuta bitoria (purple).

Shaoyan Zhang, Jinfeng Ning, Qingqing Wang  
and Wei Wang\*

Shaoyan Zhang, Jinfeng Ning, Qingqing Wang  
and Wei Wang\*

Figure 1 consists of three panels. The left panel is a schematic of a catalytic cycle. It shows a catalyst (Cv) in a dashed circle. The cycle involves the conversion of CHO to CHOH, with H<sub>2</sub>O<sub>2</sub> being consumed and H<sub>2</sub>O being produced. A red arrow labeled 'Catalysis' points from CHO to CHOH. The middle panel shows a series of images of a microfluidic device. A catalyst droplet (red) and a substrate droplet (blue) are shown reacting. The right panel is a plot of Distance (mm) versus Time (min). The data points show a linear relationship, with a linear fit equation:  $l = 1.215x + 0.646r$  and  $r^2 = 0.9983$ .

Muhammad Idrees Khan, Qiang Zhang, Youli Tian,  
Shah Saud, Yiren Cao, Jicun Ren, Weiwen Liu  
and Chengxi Cao\*

Muhammad Idrees Khan, Qiang Zhang, Youli Tian,  
Shah Saud, Yiren Cao, Jicun Ren, Weiwen Liu  
and Chengxi Cao\*

bioactive peptides VPP interactions

DNA

promoter

Gene expression

Gen CAT

Gen SOD

Nadia Mabel Pérez-Vielma, Modesto Gómez-López,  
Jesús Maldonado, José Correa-Basurto,  
María de los Ángeles Martínez-Godínez and  
Ángel Miliar-García\*

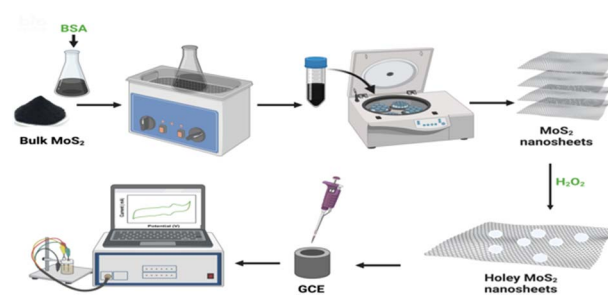
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Ángel Miliar-García\*

## PAPERS

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**Holey MoS<sub>2</sub>-based electrochemical sensors for simultaneous dopamine and uric acid detection**

Hasan Huseyin Ipekci\*



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**A novel online dispersive liquid–liquid microextraction for the spectrophotometric determination of free glycerol in biodiesel**

Vivian Maringolo, Alexandre Zatkovskis Carvalho and Diogo Librandi Rocha\*

