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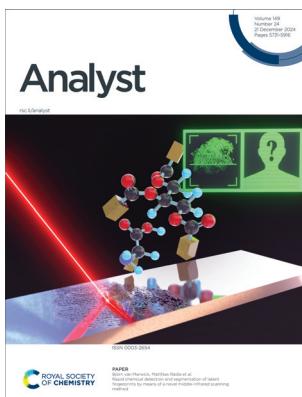
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Cover

See Frederik Lemmyte et al., pp. 5762–5767.

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Inside cover

See Björn van Marwick, Matthias Rädle et al., pp. 5768–5783.

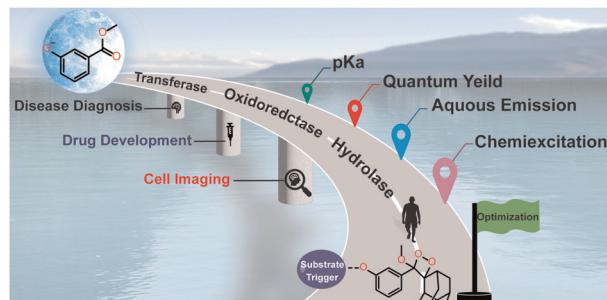
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CRITICAL REVIEW

5739

Phenoxy-1,2-dioxetane-based activatable chemiluminescent probes: tuning of photophysical properties for tracing enzymatic activities in living cells

Jagpreet Singh Sidhu,* Gurjot Kaur, Atharva Rajesh Chavan, Mandeep K. Chahal and Rajeev Taliyan

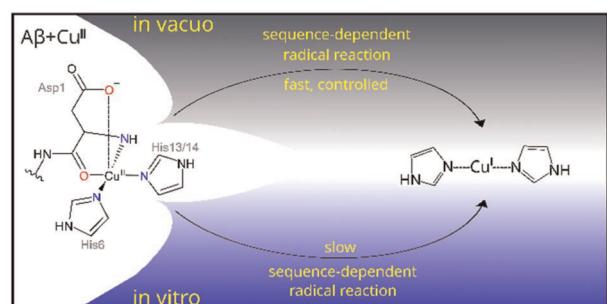


COMMUNICATION

5762

Mass spectrometry reflects key aspects of copper-amyloid β chemistry

Sarah Brandner, Tanja Habeck and Frederik Lemmyte*



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Fundamental questions
Elemental answers

PAPERS

5768

Rapid chemical detection and segmentation of latent fingerprints by means of a novel middle-infrared scanning method

Björn van Marwick,* Tim Kümmel, Felix Wöhler, Felix Lauer, Jan Hoffmann and Matthias Rädle*

Introduction
The way to find latent fingerprints
Current analytical methods for chemical and forensic tracing
Established imaging methods for chemical and forensic tracing
Chemical challenge of different surfaces

Material and Methods
Latent fingerprints in dactyloscopic context
A review of chemical composition of latent fingerprints
Novel measurement method for rapid latent fingerprint detection
Sample preparation and measure conditions
Algorithms and data (pre-) processing

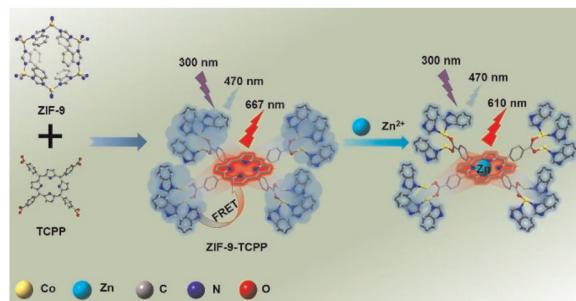
Results
A proof of concept - Challenging common imaging methods
Rapid chemical latent fingerprints segmentation on different surfaces
How to image hidden latent fingerprints in chemically similar substances
3D latent fingerprint visualization depending on chemical middle-infrared information

Conclusions

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A novel light-harvesting ZIF-9-TCPP as a promising FRET-based ratiometric fluorescence probe for sperm mobility

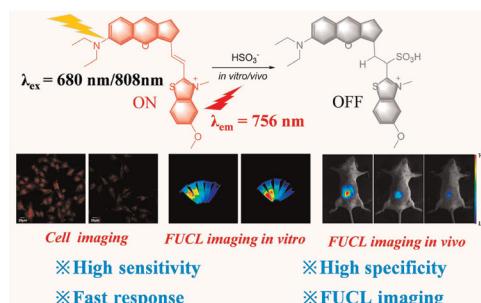
Yi-Xuan Li, Yu-Xuan Dai, Ju-Zheng Wang, Jérôme Chauvin, Xue-Ji Zhang, Serge Cosnier, Robert S. Marks and Dan Shan*



5791

A near-infrared frequency upconversion fluorescent probe for rapid and sensitive visual detection of sulfur dioxide

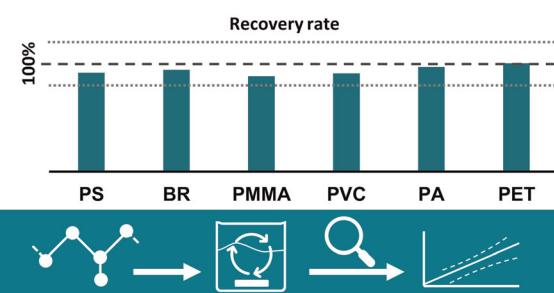
Hong Zeng, Xiao Ma, Shufen Pan, Yuting Han, Yanyan Tang, Yulan Fan and Yongquan Wu*



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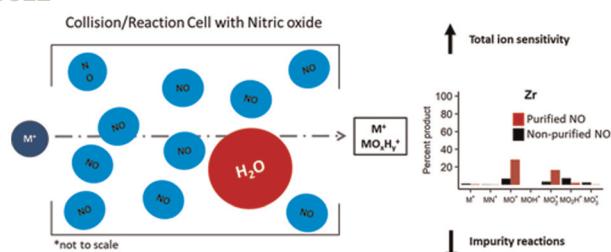
Highly selective solid–liquid extraction of microplastic mixtures as a pre-preparation tool for quantitative nuclear magnetic resonance spectroscopy studies

Marcel Günther and Wolfgang Imhof*



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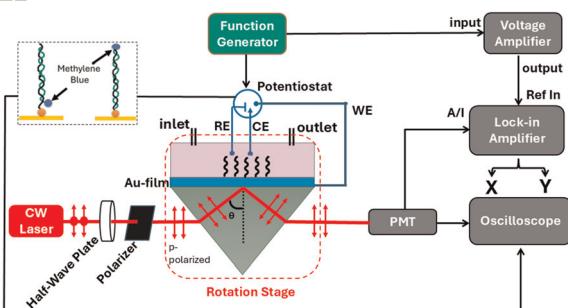
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The impact of gas purity on observed reactivity with NO using inductively coupled plasma tandem mass spectrometry

Amanda D. French,* Kirby P. Hobbs, Richard M Cox and Isaac J. Arnquist

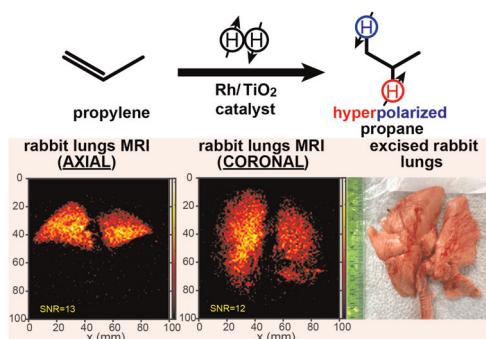
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Electrochemically modulated surface plasmon waves for characterization and interrogation of DNA-based sensors

Anil Sharma, Thomas Hulse, Aymen H. Qatamin, Monica Moreno, Klester S. Souza, Marcelo B. Pereira, Fabricio S. Campos, Leandro B. Carneiro, Antonio M. H. de Andrade, Paulo M. Roehe, Flavio Horowitz and Sergio B. Mendes*

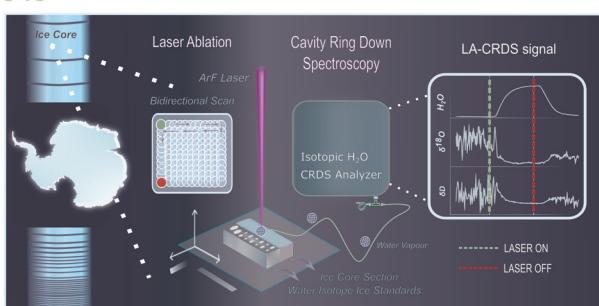
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Rapid lung ventilation MRI using parahydrogen-induced polarization of propane gas

Md Raduanul H. Chowdhury, Clementinah Oladun, Nuwandi M. Ariyasingha, Anna Samoilenko, Tarek Bawardi, Dudari B. Burueva, Oleg G. Salnikov, Larisa M. Kovtunova, Valerii I. Bukhtiyarov, Zhongjie Shi, Kehuan Luo, Sidhartha Tan, Juri G. Gelovani, Igor V. Koptyug, Boyd M. Goodson and Eduard Y. Chekmenev*

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Towards high-resolution water isotope analysis in ice cores using laser ablation – cavity ring-down spectroscopy

Eirini Malegiannaki,* Pascal Bohleber, Daniele Zannoni, Ciprian Stremlan, Agnese Petteni, Barbara Stenni, Carlo Barbante, Bo M. Vinther and Vasileios Gkinis

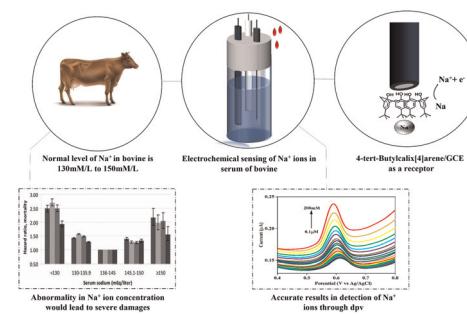


PAPERS

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Electrochemical sensing of sodium ions present in bovine serum using 4-tert-butylcalix[4]arene as a receptor

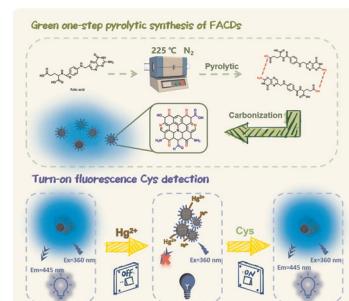
Adrian Ebenezer Paul, Gaurav Gaur,
Abdullah Al Souwaileh, Jerry J. Wu and
Sambandam Anandan*



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Green one-step pyrolytic synthesis of folic acid-derived carbon dots for sensitive turn-on fluorescence detection of cysteine

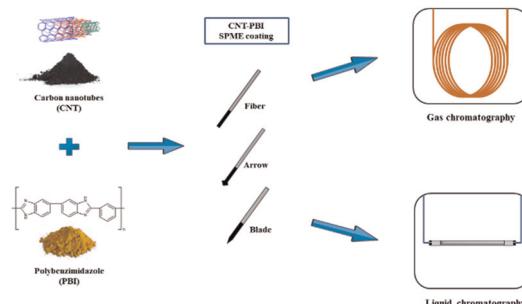
Jie Huang, Ruicheng Xu, Qiaoting Yang, Kang Tao and
Dan Shan*



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Universal carbon nanotubes-polybenzimidazole SPME coating and its application for both gas and liquid chromatography

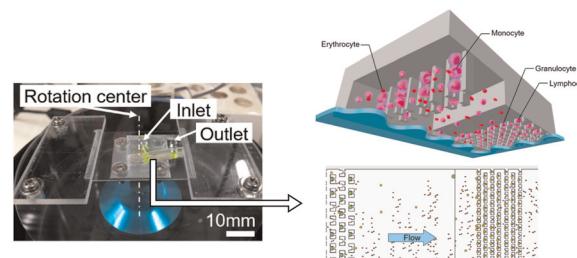
Igor Gustavo Carvalho Oliveira, Khaled Murtada,
Maria Eugênia Costa Queiroz and Janusz Pawliszyn*



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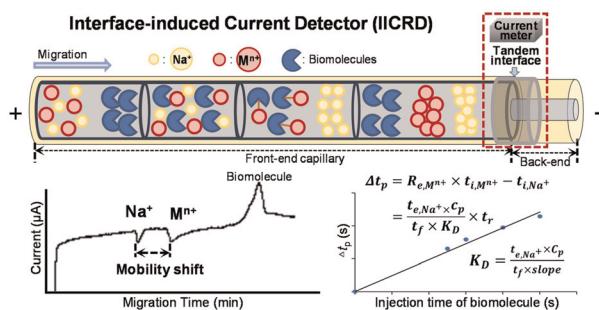
A novel microfluidic chip for on-site radiation risk evaluation

Kenta Takahashi, Takahiro Tamura, Kosuke Yamada,
Kaisei Suga, Yuri Aoki, Ryota Sano, Kentaro Koyama,
Asako J. Nakamura* and Takaaki Suzuki*



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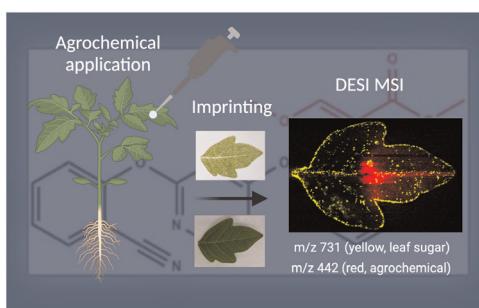
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Determination of metal–biomolecule interactions by relative mobility shift partial filling affinity capillary electrophoresis

Tao Huang, Jinxiang Xu, Chunsu Liang, Liyu Gong and Xiaomei Ling*

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Visualizing active fungicide formulation mobility in tomato leaves with desorption electrospray ionisation mass spectrometry imaging

Akhila Ajith, Emrys Jones, Emily Prince, Drupad K. Trivedi, Giles N. Johnson, Phillip J. Milnes and Nicholas P. Lockyer*

