

Analytical chemistry: from an era of changes, to a change of era. Ten years developing new tools, for new social challenges

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Resumen

During the last half of the 20th century the analytical science went through massive changes. The introduction and continuous improvement of the instrumental techniques allowed exponential enhancements of the analytical methods in qualitative and quantitative terms. Existing techniques improved their accuracy and precision while pushing limits of detection to astonishing low levels. New techniques, on the other hand, have expanded the ability to gain insight into chemical systems. When facing all these exiting achievements, one may ask: what is next?

In this talk I would like to share some recent advances in the development of analytical tools that do not respond to the classic path of “improving the limit of detection”, but rather to solve social challenges that require paradigm-shifting approaches. From the first developments of ambient mass spectrometry, to the recent advances in wearable chemical sensors, this talk will try to show some emerging platforms and procedures in chemical analysis, and the way they can be used to face the urgent –and rather complex- new social challenges.