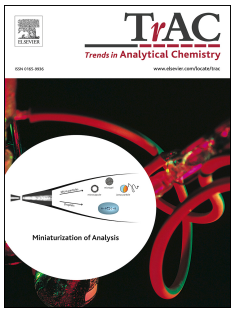
Accepted Manuscript



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PII: S0165-9936(17)30273-X

DOI: 10.1016/j.trac.2017.10.022

Reference: TRAC 15040

To appear in: *Trends in Analytical Chemistry*

Received Date: 26 July 2017

Revised Date: 28 October 2017

Accepted Date: 29 October 2017

Please cite this article as: A. Antonacci, F. Arduini, D. Moscone, G. Palleschi, V. Scognamiglio, Nanostructured (Bio)Sensors For Smart Agriculture, *Trends in Analytical Chemistry* (2017), doi: 10.1016/j.trac.2017.10.022.

Nanostructured (Bio)Sensors For Smart Agriculture

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Abstract

Intense farming represents one of the main sources causing detriments to vital resources as lands and water, due to unsustainable agricultural practices and the resulting environmental pollution. Furthermore, the increasing world population and the impact of climate change contribute to worsen these constraints. To these regards, several attempts have been completed to provide pioneering technologies for facing against these challenges, including nanostructured (bio)sensors. Indeed, nanotechnology-based (bio)sensors, thanks to the exploitation of fascinating properties of functional materials at the nanoscale, can support farmers in delivering fast, accurate, cost-effective, and in field analyses of i) soil humidity, ii) water and soil nutrients/pesticides, and iii) plant pathogens. Herein, we report a glance of the nano nanostructured (bio)sensors developed to support smart agriculture, reporting representative examples form the literature of the last 10 years.

Keywords: ~~nano~~ nanostructured (bio)sensors, nanomaterials, smart agriculture, soil physico-chemical parameters control

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