

Abstract

# Detection of Indoor Air Pollutants Using Reactive Sputtering/GLAD of Tin Oxide Thin Films <sup>†</sup>

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**Abstract:** Indoor air quality is a topic of major importance for public health. Among the numerous chemical compounds that can be found in indoor air, BTEX (benzene, toluene, ethylbenzene and xylene) are considered as one of the most toxic volatile organic compounds (VOCs). The present contribution is focused on the use of an original approach to produce nanostructured materials based on tin oxide with unexplored features, especially for gas sensors. In this work, we combine two physical vapor deposition techniques based first on a pulsing injection of the reactive gas during the deposition and second focused on the "GLAD" (Glancing Angle Deposition) technique, which enables structuring various architectures. These active layers are deposited on micro-hotplate to produce micro-chemical gas sensors for the detection of BTEX.

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