

Special Issue

Nanostructured Metal Oxides for Cancer Detection and Therapy

Message from the Guest Editor

Despite the wide assortment of chemoresistive materials, still metal-oxides keep a leading role in gas-sensing, because of their high sensitivity, low cost and easy implementation. Unfortunately the system lacks in intrinsic selectivity. Therefore, several studies aiming at creating selective sensor arrays have been carried out. In recent years, large part of the Sensor Community has concentrated research efforts into two separate directions, which, in fact, rarely can be followed by a single research group. The first line consists in basic understanding of the mechanisms of sensing. The second one explores the wide range of applications of this technology to people health care. In particular, breath and skin analysis to detect cancer markers, e.g., volatile organic compounds, with metal-oxide-based devices are the most followed routes, specifically to detect melanomas, lung cancer and derived metastases. Recently, also fecal, urine, blood and ill-tissue analyses have attracted widespread interest. Therefore, the aim of this special issue is to provide a broader view of the most promising results of the leading laboratories in the field.

Guest Editor

Prof. Dr. Cesare Malagù

Department of Physics and Earth Science, University of Ferrara, 44122 Ferrara, Italy

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

School of Geography, Earth and Environmental Science, University of
Birmingham, Birmingham B15 2TT, UK

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