Special Issue

Surface Modified Nanoparticles: For Gas and Chemical Sensors

Message from the Guest Editor

With the fast advances in the application of nanoparticles, considerable efforts have been devoted to producing surface-modified nanoparticle composites to achieve integrated performance with synergic effects for applications in various fields, including gas sensors, chemical sensors, catalysts, food applications, energy conversion, and storage. This Special Issue focuses on surface-modified nanoparticles and their applications in gas sensors, chemical sensors, catalysts, and so on. In particular, the topic of interest includes but is not limited to:

- Surface-modified nanoparticles and material characterizations;
- Nanostructured materials for gas sensor applications;
- Chemical sensors based on surface-modified nanoparticles;
- Development and application of mass-sensitive transducers;
- Sensing principles and mechanisms of gas sensors and chemical sensors;
- Exploring new and efficient catalysts based on surface-modified nanoparticles;
- Food applications based on surface-modified nanoparticles.

Guest Editor

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Deadline for manuscript submissions

closed (30 June 2025)

Coatings

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.4

mdpi.com/si/95004

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About the Journal

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.
Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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