



## Cu and Cu-Based Nanoparticles: Applications in Catalysis

Guest Editors:

**Dr. Laura Clarizia**

Department of Chemical,  
Materials and Production  
Engineering (DICMaPI), Università  
degli Studi di Napoli Federico II,  
Piazzale V. Tecchio, 80125 Napoli,  
Italy

**Prof. Dr. Raffaele Marotta**

Department of Chemical  
Engineering, Materials and  
Industrial Production, University  
of Naples Federico II, Corso  
Umberto I, 40, 80138 Napoli, NA,  
Italy

Deadline for manuscript  
submissions:

**closed (31 July 2019)**

### Message from the Guest Editors

Dear Colleagues,

Metal nanoparticles exhibit improved optical, electronic, magnetic, chemical, and biological properties when compared to their bulk correspondents. Copper is an earth-abundant and inexpensive metal with high electrical and thermal conductivity, high corrosion resistance, good ductility, malleability, and tensile strength. Due to such properties, copper based nanomaterials can effectively replace rare and expensive noble-metal catalysts commonly employed in commercial chemical processes. Copper-based nanocatalysts have a number of applications, including gas-phase reactions, Ullmann reactions, cross-coupling reactions, A3-coupling reactions, azide-alkyne cycloaddition, photocatalysis, and electrocatalysis.

This Special Issue of the journal Applied Sciences “Cu and Cu-Based Nanoparticles: Applications in Catalysis” aims to cover recent advances in the development of copper-based nanosized particles for different catalytic applications.

Dr. Laura Clarizia  
Prof. Dr. Raffaele Marotta  
*Guest Editors*





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**

Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

## Contact Us

---

*Applied Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/applsci](http://mdpi.com/journal/applsci)  
[applsci@mdpi.com](mailto:applsci@mdpi.com)  
[X@Applsci](https://twitter.com/Applsci)