

## Special Issue

# Recent Advances in sp-Carbon-Based Materials and Nanostructures

### Message from the Guest Editors

Sp-carbon-based materials are of potential interest for future applications in molecular electronics, optoelectronics, energy conversion and storage, catalysis, as a possible alternative to overcome the limitations of the presently employed materials. The aim of this Special Issue is to present the last achievements obtained in the research on sp-carbon-based materials (polyynes, cumulenes, linear carbon chains, carbon atomic wires) and related systems (hybrid sp-sp<sup>2</sup> or sp-sp<sup>3</sup> systems). Both experimental (synthesis, preparation, characterization, applications) and theoretical contributions (molecular modeling and design) are welcome and, in particular, studies presenting a multidisciplinary approach are encouraged.

#### **Keywords:**

- Carbyne
- Polyynes, cumulenes, and related structures
- sp-carbon nanostructures
- 2D sp-carbon based materials: Graphyne and Graphdiyne
- Hybrid sp-sp<sup>2</sup> and sp-sp<sup>3</sup> carbon systems

---

### Guest Editors

Dr. Alberto Milani

Department of Energy, Politecnico di Milano, via Ponzio 34/3, 20133 Milano, Italy

Prof. Dr. Carlo S. Casari

Department of Energy, Politecnico di Milano, via Ponzio 34/3, 20133 Milano, Italy

---

### Deadline for manuscript submissions

closed (31 December 2019)



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/21710](https://mdpi.com/si/21710)

*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[applsci@mdpi.com](mailto:applsci@mdpi.com)

[mdpi.com/journal/](https://mdpi.com/journal/)

[applsci](https://mdpi.com/journal/applsci)





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/journal/  
applsci](https://mdpi.com/journal/applsci)



## About the Journal

### 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.

---

### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, Italy

---

### 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, Embase, CAPIus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering )