

## Special Issue

# Greenhouse Integrated Photovoltaic System

### Message from the Guest Editor

Consumers demand sustainable agricultural products that are respectful of the environment and of the workers who obtain them. Many crops (ornamental, vegetables and fruit, mainly) are developed in different types of greenhouses depending on the country where they are located. This fact requires the use of renewable energies (hydro, wind, geothermal, biomass and solar). The integration of photovoltaic systems in greenhouse crops is a reality. Covers, irrigation systems, automata, mechanisms, machinery, ventilation, cooling, heating, etc., need energy for their operation. The adaptation of different photovoltaic systems to each type of crop, type of greenhouse and location, requires precise studies to guarantee its technical and economic viability.

Keywords: Greenhouse crops and solar panels; Solar photovoltaic greenhouses; Photovoltaic irrigation systems; Solar radiation distribution in photovoltaic greenhouses; Greenhouse roof for energy; Photovoltaic systems in agriculture; Other photovoltaic systems.

---

### Guest Editor

Prof. Dr. Ángel-Jesús Callejón-Ferre

Department of Engineering, University of Almería, Research Center CIMEDES, Agrifood Campus of International Excellence (CeIA3), 04120 La Cañada de San Urbano, Almería, Spain

---

### Deadline for manuscript submissions

closed (15 August 2019)



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.3



[mdpi.com/si/20127](https://mdpi.com/si/20127)

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

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





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.3



[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), Inspec, CAPIus / SciFinder, and other databases.

#### Journal Rank:

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