

## Special Issue

# Advances in Cadmium Telluride (CdTe) Thin Film Photovoltaic Solar Cells

### Message from the Guest Editor

The research on thin film CdTe photovoltaic solar cells has been re-gaining momentum in recent years, due to commercial advances made with regard to CdTe technology. CdTe solar panels are now at parity with poly-crystalline silicon for performance and cost. The recent work in this area appears to focus on increasing absorber carrier density and lifetime, engineering of the material bandgaps for the enhanced light capture and optimization of the oxide/telluride buffer layers for the front/back surface of the CdTe device. This Special Issue aims to serve an improved understanding of the key issues with the state-of-the art CdTe solar cells to enable further advancement of R&D of the CdTe photovoltaic technology. Not only experimental reports on the CdTe device performance and scaling-up but also theoretical papers, particularly on band-alignment and doping issues, are warmly welcome.

---

### Guest Editor

Dr. Giray Kartopu

Department of Mathematics, Physics and Electrical Engineering,  
Northumbria University in Newcastle, Newcastle upon Tyne NE1 8ST,  
UK

---

### Deadline for manuscript submissions

closed (31 July 2020)



## Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed



[mdpi.com/si/17492](https://mdpi.com/si/17492)

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

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





# Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed



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



## About the Journal

### Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

---

### Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

---

### 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), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

#### Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /  
CiteScore - Q1 (Condensed Matter Physics)