



## Coordination Complexes for Dye-Sensitized Solar Cells (DSCs)

Collection Editor:

**Prof. Dr. Catherine Housecroft**

Department of Chemistry,  
University of Basel, Building 1095,  
Mattenstrasse 22, Postfach, CH-  
4002 Basel, Switzerland

### Message from the Collection Editor

Dear Colleagues,

The Grätzel dye-sensitized solar cell (DSC) was developed in the 1990s and converts solar into electrical energy. Grätzel's breakthrough use of sintered nanoparticles of the semiconductor has been followed by the development of a myriad of sensitizers. The vast majority of investigations are focused on n-type DSCs. However, much work is still needed to improve the performances of p-type DSCs. State-of-the-art dyes encompass ruthenium complexes, organic and zinc(II) porphyrin-based dyes with the best conversion efficiencies reaching ~11–14%. Copper(I)-based dyes are seen as sustainable alternatives to ruthenium-containing sensitizers and, with the aid of co-sensitization using an organic dye, have been shown to achieve efficiencies of up to ~65% that of the benchmark ruthenium(II) sensitizer N719. For p-type DSCs, cyclometallated ruthenium dyes show promise, and an emerging family of iridium-containing dyes has recently entered the field. This Topical Collection aims to highlight the variety and importance of coordination complexes as sensitizers in DSCs.

Prof. Dr. Catherine E. Housecroft





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Duncan H. Gregory**  
School of Chemistry, University of  
Glasgow, University Avenue,  
Glasgow G12 8QQ, UK

## Message from the Editor-in-Chief

Inorganic chemistry remains a lynchpin of modern chemistry, not only embracing the function and reactivity of combinations of most elements of the periodic table, but also providing a footing for studies of materials, catalysts, drugs, fuels and industrial chemicals. Arguably, the role and reach of inorganics in society have never been as great as today. Adventurous research at the heart and at the extremes of inorganic chemistry is vital to further advances and *Inorganics* offers authors the opportunity to publish exciting new research in an open access format.

## 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), CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (*Chemistry, Inorganic and Nuclear*) / CiteScore - Q2 (*Inorganic Chemistry*)

## Contact Us

---

*Inorganics* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/inorganics  
inorganics@mdpi.com  
X@inorganics\_MDPI