

Special Issue

Synthesis, Structure and Ultrafast Spectroscopy of Photosensitizers with Earth-Abundant Transition Metals

Message from the Guest Editors

Over the last 10 years, an intense research effort has been devoted to the development of photosensitizers based on Earth-abundant 3d metals, which may ultimately replace the traditional rare and expensive 4 and 5d transition metals for applications such as dye-sensitized solar cells and photoredox catalysis. Many new design principles have been proposed in recent years, leading to breakthrough results, including luminescent metal complexes with high photo-chemical activity. New chemical designs are validated by ultrafast spectroscopy in many different spectral domains from the infrared to X-ray, and advanced quantum chemical simulations rationalise the photophysical properties. The present Special Issue aims at reviewing the most recent advances in the area including the intricate synthesis, quantum dynamics simulations and ultrafast spectroscopy. This Special Issue will not only be a comprehensive report of the state of the art, but will also highlight the most successful approaches and versatile lessons learned in order to foster further research and applications of Earth-abundant transition metal photosensitizers.

Guest Editors

Prof. Dr. Stefan Haacke

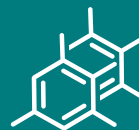
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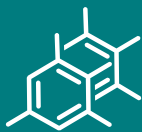


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