Special Issue

Organometallic Compounds: Structure, Physical Properties, and Applications

Message from the Guest Editor

The photophysical properties of organometallic compounds have recently been found in various applications, such as dopants in the active layers for OLEDs, as well as in biological phosphorescent labels and sensors, among a host of others. Other applications of organometallics are in photo redox catalysis, as a part of green synthesis methods; to activate water oxidation and reduction catalysts in solution; for photoactive centers and optical sensors; and as active layers for the gas detection and in the field of photovoltaic applications. A special class of applications for organometallic compounds is related to the hybrid perovskites that can be used for humidity and gas sensing applications. In this context, the synthesis of organometallic compounds plays an important role in the design of organometallic complexes and their further properties and applications. A combination of experimental and computational analyses can help in predicting and improving the physical applications of these organometallic compounds, such as absorption spectra, dipole moment, theoretically estimated biological potentials, and frontier molecular orbitals.

Guest Editor

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