

Tentative Outline

Special Thematic Issue

Applications of Bioorganometallics in Diagnosis and Therapy

Guest Editors: Tânia S. Morais, Dinorah Gambino, João Galamba Correia

Aims & Scope:

Although the majority of drugs are purely organic, the use of metal complexes for therapy and diagnosis has gained interest, with an increase in their clinical and commercial application. The term bioorganometallic chemistry was applied to the development of organometallic complexes with biological and medical interest in 1985. It includes organometallic complexes containing classical ligands such as CO, alkyls, and heteroaromatic ligands or biomolecules such as peptides, amino acids, steroids, and antibodies that play important roles in various biological processes and modulate their activity. This class of compounds has a great structural diversity, a far more diverse stereochemistry than organic compounds, and a variety of binding modes and redox properties that provide control of kinetic properties such as hydrolysis rate. Brought together these features pave the way towards new opportunities in the design of novel classes of effective compounds for medical applications.

This special issue aims to attract the submission of original research and review articles reporting on recent advances and developments in the field of bioorganometallic chemistry and biomedical applications. Articles that highlight the use of Ru, Fe, Co and Ti complexes as prospective anticancer agents, and emerging radiometal complexes as target-specific theranostic agents are of particular interest.

Subtopics:

Potential topics include but are not limited to the following:

- Design and synthesis of organometallic complexes as anticancer, antimicrobial, antiparasitic, antiviral, and antidiabetic agents
- Organometallic complexes for targeted therapy
- Organometallic complexes for imaging or theranostic applications
- Interaction of complexes with DNA, proteins and enzymes
- Mechanism of drug action
- Pharmacological characteristics of bioorganometallic complexes

Schedule:

- Manuscript submission deadline: 31 March 2020
- Peer Review Due: 31 May 2020
- Revision Due: 31 July 2020
- Announcement of acceptance by the Guest Editors: 15 September 2020
- Final manuscripts due: 1 November 2020

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