



Medicinal and Bioinorganic Chemistry

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Inorganic Medicines and Metallobiology

Metallo drugs and Catalysis in Cells

We design metal-based compounds as novel targeted therapeutic agents for the treatment of cancer or infectious diseases, since they are endowed with different modes of action with respect to organic drugs. For example, organometallic complexes of transition metals (e.g. Au, Ru, etc.) can be exploited as 'catalysts' of bioorthogonal transformations in cells.

Metals in Disease Mechanisms

The study of the role of metal ions (e.g. Cu, Zn, Fe) and metalloproteins in biological systems, in relation to disease mechanisms, is another active topic of our research program.

Self-assembled Metallacages As Drug Delivery Systems and Theranostic Platforms

3D-supramolecular coordination complexes featuring host-guest interactions are explored as new generation drug delivery systems and are integrated in hybrid materials for regenerative medicine applications. Self-assembly of metallacages enables the design of multimodal (nuclear) imaging and therapeutic supramolecules.

