



Application of Gold Nanoparticles and Gold-Based Polymer Composites in Biomedicine

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Message from the Guest Editors

Dear Colleagues,

Gold nanoparticles (AuNPs) are cytocompatible and have enormous potential for biomedical application. We highlight cancer treatments using photothermal and imaging therapies and cancer diagnosis due to localized surface plasmon resonance properties. Polymers stabilize AuNPs due to hindrance and repulsion forces supported by ionized sites on polymer-capping agents. Polymers can also coordinate with AuNPs, protecting them against aggregation. Biopolymers improve biomedical AuNP response, providing durability and enhanced cytocompatibility. Polymer-stabilized AuNP composites are used as drug delivery devices, sensors, scaffolds, wound dressings, coatings, and materials for nonconventional cancer therapies.

This Special Issue invites researchers to submit papers concerning AuNPs and AuNP/polymer composites applied as drug delivery platforms, photothermal and imaging agents, biosensors, wound dressings, scaffolds, and antimicrobial coatings, highlighting the progress in the current biomedicine landscape.

Prof. Dr. Alessandro F. Martins
Guest Editor





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