

Current Medicinal Chemistry

Special Issue: **Design and performances of medical devices: from bulk to surface modification**

Call for Papers

The medical devices are increasingly used in medical practice. Catheters, stents and various tubes, needles and wires are important tools in both therapy and diagnosis of various diseases including cardiovascular and urological diseases, cancer, haemorrhages, manometry, etc. The challenges in this field are related to both medical aspects as well as to the engineering of these devices and especially to their surface. This special issue is intended to analyse the main advance in the field of engineering of these devices, including the development of new bulk materials but also the surface modifications of these devices because many diseases are related to the surface and not to the bulk material.

The surface of the most medical devices is very important because this is in continuous contact with the body fluids and tissues. In most of cases, the failure of many devices is related to the limited, long term biocompatibility, infections (local infections in the first period followed by spreading into the entire body) and even clogging (especially in the cases of tubular devices). It is obvious that, surface modification can be the solution of many medical devices associated complications. By far, the nature of the surface as well as its morphology is a key factor affecting the performances of these medical devices and the advance in the last time is worthy to be investigated. The perspectives of the physical and chemical surface modification will be extensively reviewed.

The main potential subtopics include, but are not limited to:

- Biomaterials for fabrication medical devices;
- Prosthetic tubular devices;
- Surface chemistry;
- Anti-adherent, anti-biofouling and antibiofilm surfaces;
- Challenges of drug delivery systems for manufacturing medical devices;
- Characterization tools of surfaces

Tentative deadlines:

Manuscript Due	September 2016
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