

Tentative Outline

Special Thematic Issue for the journal *Recent Patents on Nanotechnology*

Title of the Thematic Issue: Nanotechnology in Biomechanics

Guest Editor: Dr. Mohammad Azadi

• Scope of the Thematic Issue:

Biomechanical engineering is widely spread through the world, especially today for the pandemic condition. Moreover, nanomaterials are now utilized in every field of mechanics and biomechanics. Merging two these topics leads to have enforced materials with improved mechanical properties, fatigue lifetimes, corrosion and wear behaviors, etc., in biomechanical applications. Nowadays, additive manufacturing could help designers in order to fabricate all complex structures in automotive and aerospace industries, besides biomechanics applications. For such a technique, 3D-printers have been widely used. Moreover, smart materials could be 3D-printed, entitled 4D-printing, to have an additional movement to find their optimized or targeted shapes. In this thematic issue in the journal of *Recent Patents on Nanotechnology*, a list of high-value articles about the nano-bio-mechanics study will be reviewed and published. In addition, new manufacturing processes through novel nano-bio-materials could be presented including 3D-printing and 4D-printing.

Keywords: Nanotechnology, Biomechanics, Additive manufacturing, 3D-printing, 4D-printing, Nanomaterials.

Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Nanomaterials and nanotechnologies in biomechanical applications
- Additive manufacturing for nano-bio-structures: 3D-printing and 4D-printing
- Mechanical properties and Materials behaviors in nano-bio-mechanics: fatigue, corrosion, wear, etc.

Tentative titles of the articles and list of contributors:

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Schedule:

- ✧ Thematic issue submission deadline: 1 July 2021

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