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Guest Editor

This issue contains a selection of papers presented at "Symposium H: New Trends in Biomaterials and Nanomaterials Applied to Biosystems" of XII Brazilian Materials Research Society Meeting (SBPMat 2013), which was held in Campos do Jordão, SP, Brazil, during 29th September to 3rd October, 2013. The Symposium H provided a platform for discussing current advancements and future trends in biomaterials for biomedical and dental applications, nanomaterials applied to biosystems and materials derived from renewable resources.

The organizing committee of this Symposium was composed by Prof. Carlos Roberto Grandini (Universidade Estadual Paulista "Júlio de Mesquita Filho", Bauru, Brazil), Prof. Rossana Mara da Silva Moreira Thiré (Universidade Federal do Rio de Janeiro/COPPE, Rio de Janeiro, Brazil), Prof. Ana Paula Rosifini Alves Claro (Universidade Estadual Paulista "Júlio de Mesquita Filho", Guaratinguetá, Brazil), Prof. Juliano Elvis Oliveira (Universidade Federal da Paraíba, João Pessoa, Brazil).

The selected papers which appear in this issue were peer-reviewed as regular journal papers. They give an overview of most of the topics discussed, showing the application of new materials and new technologies in Health and Sustainable Development areas. Some authors evaluated the use of recycled polymers, wood waste and bamboo waste for production of green composites as an alternative for traditional construction materials. Nanotechnology applied to biomedical area was taken into consideration in papers which deal with surface modification of titanium samples by formation of TiO_2 nanotubes layer and with production of iron oxide loaded PCL (poli-ε-caprolactona) nanoparticles for using as biosensors and magnetic bioseparation, for example. Hybrids polymeric systems with controlled drug release for wound healing were also investigated. Concerning about new technologies, an additive manufacture technique was evaluated for fabrication of customized three-dimensional (3D) calcium phosphates scaffolds for bone repair and regeneration.

We are confident that this issue reflects the wide range and transdisciplinary character of research in Materials Science and Engineering applied to biological systems.