

## Editorial

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This issue contains a selection of papers presented at the 7th Latin American Conference on Metastable and Nanostructured Materials (NANOMAT2017) which was held in Brotas, SP, Brazil from 19 to 22 on March 2017. The NANOMAT2017 was organized by the Department of Materials Engineering, Federal University of São Carlos (UFSCar) and the School of Applied Sciences, State University of Campinas (UNICAMP). The triennial series of conferences started in São Pedro - São Paulo - Brazil (2001) and was followed by Foz do Iguaçu - Paraná - Brazil (2003), Rio de Janeiro - Rio de Janeiro - Brazil (2006), Mexico City - Federal District - México (2009), São Carlos - São Paulo - Brazil (2012), and Cancún - México (2015).

The NANOMAT series are being directed to researchers working with all classes of metastable and nanostructured materials (ceramics and glasses, metals and alloys, polymers and composites). Research in these areas has been strongly stimulated in recent years by the developments of new materials with unique mechanical, chemical and physical properties. In this context NANOMAT2017 provided a comprehensive overview of the fundamental aspects, synthesis, materials, properties, and applications in this evolving field of materials science. The sessions of NANOMAT2017 covered the following themes:

1. **Materials:** Metastable and Nanostructured Metallic, Polymeric, Ceramic or Carbon-based materials. Bulk metallic glasses; New oxide/ceramic glasses; Nanocomposites; Quasicrystals; Complex metallic alloys; Thin films and coatings.
2. **Properties and Applications:** Physical properties (magnetic, electronic, mechanical, etc.); Chemical properties; Catalytic properties; Hydrogen in metastable alloys; Health issues; Applications.
3. **Synthesis & Processing:** Phase transformations; Characterization; Structural Manipulation; Rapid solidification; Theoretical modeling; Computer simulation; Semisolid Processing, Powder Metallurgy, Spray techniques; Mechanical Processing, Surface Treatments, Laser Processing, Additive Manufacturing, Mechanical alloying, Severe plastic deformation.

In this edition of NANOMAT2017, we had more than 300 papers submitted to the conference, 240 accepted as a poster presentation and 58 as an oral presentation. Among these, 38 distinguished researchers from different institutions around the world presented their invited and plenary talks.

The 19 papers that appear in this special issue were reviewed as regular journal papers following the standards of Materials Research, with at least two referees' report before a final decision. A total of 49 papers were submitted, and only 19 were accepted after this refereeing procedure.

We expect that this issue can provide the readers with a synthesis of the exciting recent developments associated with the field of metastable and nanostructured materials.

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We very much look forward to seeing you again in the next NANOMAT.

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Guest editors*