

Editorial

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The special issue of *Journal of Materials Science* contains papers presented at the Workshop on Size-dependent Effects in Materials for Environmental Protection and Energy Application (SizeMat) held on May 25–27, 2006 in Varna (Bulgaria). The workshop was organized by the Centre of Competence on Multifunctional Materials and New Processes with Environmental Impact (MISSION), established at the Institute of General and Inorganic Chemistry of the Bulgarian Academy of Sciences in the framework of the FP6 Programme of the European Commission (Contract INCO-CT-2005-16414).

The SizeMat workshop was devoted to the size-dependent phenomena as a promising way to control the properties of materials forming the basis of modern technologies, particularly with regard to clean energy production and environmental protection. The workshop program included the following specific topics:

- Size Effects in Supported Metal Catalysts;
- Catalysts Activation & Deactivation Caused by Re-dispersion or Sintering;
- Novel High Surface Area Sorbents;
- Nanostructural Design of Composite Electrode Materials for Lithium-ion Batteries;
- Materials for Hydrogen Storage at a Nano-scale Level;
- Microstructural Effects in SOFC's.

Plenary lectures on the current state and future trends in the workshop topics were delivered by Prof. Michel Che (Pierre & Marie Curie University, Paris, France), Prof. Jim

Anderson (Department of Chemistry, University of Aberdeen, UK), Prof. Angel Linares-Solano (University of Alicante, Spain), Dr. Erik Kelder (Delft University of Technology, The Netherlands), Dr. Martin Dornheim (GKSS, Research Center Geesthacht GmbH, Germany) and Dr. Hans Buchkremer (Institute for Materials and Processing in Energy Systems, Research Centre Jülich, Germany). A total of 16 oral and 75 poster contributions of participants from 12 European countries were presented at the workshop. The diversity of the topics gave a basis for an exciting meeting and thought-provoking discussions.

Thanks are due to the European Commission for the support of the SizeMat workshop. We are grateful to the members of the Advisory Board of the MISSION Centre for their suggestions, which helped to improve the quality of the workshop program. We are indebted to the reviewers for their invaluable assistance in the selection of the published papers.

Organizing Committee

Prof. Konstantin Hadjiivanov (Coordinator of the MISSION Centre)

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Dr. Anton Naydenov (Catalysts/sorbents for environmental protection)

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