

# THE 6<sup>th</sup> EDITION OF INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE & ENGINEERING, BRAMAT 2009

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**Abstract:** *This paper presents the 6<sup>th</sup> edition of the International Conference on Materials Science & Engineering, BraMat 2009. There are presented the objectives of the conference, the organizers, the scientific and organizing committees and the sections. The papers presented at the conference were published in ISI journals and in the Bulletin of the Transilvania University. The authors of these papers are researchers from 19 countries.*

**Key words:** *materials science, conference, publications.*

The 6<sup>th</sup> edition of the International Conference on Materials Science and Engineering took place between 25<sup>th</sup> and 27<sup>th</sup> of February 2009. The 2009 BRAMAT International Conference was organised by:

- *Transilvania* University of Braşov - Materials Science and Engineering Faculty;
- Romanian Academy of Technical Sciences;
- Romanian Technical Association of Foundry;
- Romanian Association for Thermo Treatment;
- Romanian Welding Association.

The scientific committee of the Conference included academicians, correspondent members of The Romanian Academy of Technical Sciences, presidents of specialized associations, as well as home and foreign scientists: 4 from France, 4 from Spain, 2 from Israel, 2 from United Kingdom, 2 from Holland, 2 from Portugal, 1 from Bulgaria, Germany, United States, Sweden and Turkey. The organizing committee consisted of teaching

staff from Materials Science and Engineering Faculty Departments.

The purpose of this scientific meeting was to ensure the best conditions for a European evaluation of achievements in the field of advanced materials and environmental protection, acknowledging that Romanian research is a viable partner to European research.

The top fields regarded or with an impact upon the development of national economy were the following:

- organic and inorganic hybrid materials;
- conventional chemical methods for unconventional materials;
- thin layers with controlled properties processing;
- new processing with laser, electric field applications;
- polymeric materials usage;
- nanocrystals material development;
- sensors applications, biosensors;
- advanced cleaning of environment;
- nanostructured materials for energy applications.

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The goals of the conference were the following:

- A change of information concerning fields and subjects of interest for national and international research groups both as concerns and scientific knowledge.
- Developing of technologic transfer through the presence of research results beneficiaries.
- Development of research activities and drawing in young researchers to the field subject of the conference.
- Development of new research directions by establishing the opportunities in the field of materials and environmental protection.
- Identifying the demand for research, development, innovation.

All presentations had not only a fundamental research value but an important applicative potential for opening new manufacturing operations, in which the central role will be played by these advanced materials.

Sections of the conference included:

1. Technologies and equipments for materials' processing;
2. Materials science;
3. Heat treatment and surface engineering;
4. Advanced welding eco-technologies;
5. Modelling, simulation and safety in materials engineering;
6. Advanced materials for energy conversion, distribution and storage;
7. Environmental advanced materials and processes;
8. Materials and sustainable development: policies and strategies in education and research.

The conference consisted of the following kinds of activities:

- Plenary session (10 papers) hold by keynote speakers, specialists who define

their field. They established the directions of interest for the years to come, the philosophy for a sustainable development and key achievements so far.

- Section sessions (114 papers) for the general interest subjects, selected by the scientific committee, each followed by discussions.
- Poster sessions (204 papers) for applicative or development on a known field papers.
- Workshops for the fields where there are already known partnerships:
  - Advanced analysis methods in materials science (7 companies);
  - Magnetic sorting and ultrasound sensor technologies for production of high purity secondary polyolefins from waste (FP7 grant agreement 212782, acronym: W2Plastics) (7 papers);
  - Premises and results on realising of PNCDI 2 scientific research contracts (9 companies and 5 universities).

All information regarding the conference and the schedule were posted at [www.unitbv.ro/sim/bramat](http://www.unitbv.ro/sim/bramat), the place where participants also registered.

For dissemination of conference's results within the academic and business world and for a make this conference popular in the European and international academic environment, a CD-ROM with the Book of Abstracts was edited, which was delivered along with the conference program on registration.

The conference papers were subject to peer review evaluation and publication by the: Environment Engineering and Management Journal, Journal of Optoelectronic and Advanced Materials, Metalurgia International, Romanian Journal of Physics and also this edition of Bulletin of the *Transilvania* University of Braşov.