

Special Issue of the Bulletin of the Polish Academy of Sciences on “Advanced Materials and Technologies”

Physical Metallurgy and Materials Science Conference Advanced Materials & Technologies AMT 2010

The Physical Metallurgy and Materials Science Conference is traditionally held in Poland every three years as a periodic event of:

- Committees of Materials Science and Metallurgy of the Polish Academy of Sciences,
- Polish Materials Society (member of FEMS),
- Federation of European Material Society (FEMS).

The first conference was held in 1953, and since then, 18 conferences in the field of materials science have been held. The scope of the conference has been expanded to include intermetallics, ceramics, polymers, composites, and biomaterials, bringing together the research in these fields from around the world.

Till now, the conference has welcomed participants from the USA, Australia, Germany, France, Austria, Great Britain, Russia, Republic of China, Spain, the Czech Republic, Slovakia, Mexico and Israel.

AMT is focused on the progress in materials processing, particularly on the fundamental aspects of the relationship between the chemical composition, the structure in nano- micro- and meso-scales, of bulk and surface, and the properties of advanced materials, as well as on the technological processes which produce the structure and properties desired. The characterization and modeling of the microstructure, as well as the application, are also within the scope of the conference's subject area. The scope of the conference is flexible; thus, new directions are introduced, and at the present conference they are: “materials science at the intersection of engineering and medicine”.

The place of the AMT conference is selected very carefully within the regions famous for the Polish folk tradition. The XIX AMT is held in Zakopane, at the foot of the Tatra Mountains.

This special issue of Bulletin presents the contributions of the invited speakers of the conference. They belong to the group of the best scientists in Europe and most of them are the leaders of famous research groups in materials science.

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