Preface

The series "Hungarian Conference and Exhibition on Materials Science, Testing and Informatics" was intended to provide a forum where Hungarian and foreign scientists and research groups interested in metals and alloys, silicates, polymers and composites get an opportunity to exchange and publish ideas and establish new and integrated partnerships. The 4th Hungarian Conference and Exhibition on Materials Science, Testing and Informatics was held at the Balaton lakeshore in Balatonfüred, October 12-14, 2003.

The conference was organised in four sections:

- Materials and Technologies of the New Millennium including the topics of Mechanical Engineering, Electrotechnics, Energetics, Ceramics, Polymers, Biotechnology
- Modern Research and Characterization Methods
- Modelling and Materials Informatics
- Innovative Products and Technologies including Special Materials Structures, Technologies and Properties, Nanostructures, Smart Materials, Gradient Materials

Plenary talks on the first day involved keynote lectures by representatives of governmental and industrial funding organisations, invited scientists from abroad, etc. Over twenty invited oral talks presented in the sections reviewed an almost complete spectrum of activities in Hungary.

Round table discussions complemented the program dealing with

- · Reflection on innovation law,
- Integration in the European research region,
- Experience of postgraduate education in materials science.

The organisers present this volume as a reviewed selection of papers submitted to publication by participants. Chapters in the proceedings follow the above sections of the meeting.

The organisers express their gratitude to all sponsors. Thanks are due to organising societies, as the Hungarian Materials Science Society, the ASM Hungary and to other Hungarian scientific and engineering societies for their support.

Budapest - Dunaújváros, 04th May, 2004

Dénes ZSÁMBÓK Chairman of Organising Committee

József GYULAI Chairman of Programme Committee

Balázs VERŐ Secretary of Organising Committee Ildikó KÓNYA Secretary of Programme Committee