

## Preface

The 7th International Conference on Electronic Ceramics and their Applications, ELECTRO-CERAMICS VII — 2000 brought together the scientific community working in the field of electronic ceramics. The conference took place on 3–6 September 2000, at the Portorož Convention Centre, Portorož, Slovenia. The conference was organised by the “Jožef Stefan” Institute, Ljubljana, Slovenia, under the auspices of the European Ceramic Society (EcerS), the International Microelectronics and Packaging Society (IMAPS) and the International Ceramic Federation (ICF). All together, 336 scientists from 32 countries participated.

The participants shared their recent results in a plenary session, 10 sessions with 24 blocks of oral presentations and a poster session. There were one plenary, 16 invited, 82 oral and 215 poster contributions, a total of 314.

It was very pleasing to have 81 young researchers attend the conference and participate fully at all the scientific and social events. This gave them a unique opportunity to obtain extensive information about the state-of-the-art in the field of electroceramics, as well as the main topics and trends in research and development. The knowledge, ideas and new contacts which they made at the conference will help them in their future work and careers.

The ELECTROCERAMICS VII — 2000 conference covered a broad spectrum of research activities related to materials and devices with special functional properties: ferroelectric, piezoelectric, pyroelectric ceramics, ferroelectric thin films, dielectric ceramics, insulators, multi-layer structures, microwave ceramics, ionic and electronic conductors, transport phenomena, defects, electric conductivity, materials for SOFCs, grain-boundary controlled processes, varistors, PTCR materials, magnetic materials, superconductors, optical ceramics, photonics, thick films, packaging, sensors, composites, nano-materials, nano-structures, nano-technologies, electron microscopy of electroceramics, processing, sintering and microstructure development.

Contributions presented at the conference addressed many of the hot topics in the field of electronic ceramics,

showed the state-of-the-art in the field, opened many new interesting research and development subjects and indicated future trends. The reviewed contributions are collected together in this volume.

The pleasant climate of the late summer on the Adriatic coast in Portorož was ideal for the Conference. It provided us with bright sunny days, mild temperatures and warm coastal waters just beside the Conference venue. The Mediterranean evenings with the air scented by pine trees meant there were excellent opportunities for continuous discussion or just getting together with old friends.

We would like to thank all the oral and poster contributors, and the session chairpersons, who have devoted their time and effort to the overall success of this conference. We are indebted to the Local and International Advisory Boards for their advice concerning planning and for spreading information about the conference.

Special thanks are also due to the sponsors of the conference: the European Commission, Human Potential Programme: High-Level Scientific Conferences, Contract Number HPCF-CT-2000-00312, which provided grants for young researchers; the Slovenian Ministry of Science and Technology; Aixtron AG, Aachen, Germany; aixACCT Systems GmbH, Aachen, Germany; Adria Airways, Ljubljana, Slovenia; Keko Varicon, d.o.o., Žužemberk, Slovenia and the Jožef Stefan Institute.

The conference, and these proceedings, could not have come about were it not for the efforts of the members of the Ceramics Department at the Jožef Stefan Institute: the final thank you goes to them.

Marija Kosec  
Barbara Malič  
*Josef Stefan Institute*  
Jamova 39  
1000 Ljubljana, Slovenia  
E-mail address: [barbara.malic@ijs.si](mailto:barbara.malic@ijs.si)

# Conference Committees

## Local Conference Organizing Committee (Jožef Stefan Institute, Ceramics Department)

Chair: Marija Kosec  
 Proceedings: Barbara Malič  
 Program: Darko Makovec  
 Treasurer: Slavko Bernik  
 Webmater: Saša Javorič  
 Exhibition: Saša Novak  
 Publicity: Srečo Škapin  
 Lector: Paul McGuinness  
 Secretariat: Sanja Fidler

## International Advisory Committee

### ELECTROCERAMICS VII '00

Honorary Chairperson: P. H. Duvigneaud (Belgium)

P. Abelard (France)	F. Greuter (Switzerland)	C. A. Randall (USA)
J. L. Baptista (Portugal)	G. Gusmano (Italy)	N. Setter (Switzerland)
R. Brook (UK)	M. P. Harmer (USA)	B. Thierry (France)
R. Buchanan (USA)	J.-M. Haussonne (France)	H. L. Tuller (USA)
W. K. Choo (Korea)	K. Kempter (Germany)	R. Waser (Germany)
P. Duran (Spain)	D. Kolar (Slovenia)	G. de With (The Netherlands)
R. Freer (UK)	M. Kosec (Slovenia)	H. Yanagida (Japan)
	E. Olsson (Sweden)	

## National Advisory Board

R. Blinc	S. Kobe	D. Suvorov
M. Čeh	T. Kosmač	A. Žnidaršič
M. Drofenik	S. Pejovnik	

## Supporters

European Ceramic Society — EcerS  
 International Microelectronics and Packaging Society — IMAPS  
 International Ceramic Federation — ICF

## Sponsors

Ministry of Science and Technology of the Republic of Slovenia, Ljubljana, Slovenia  
 European Commission, Brussels, Belgium  
 Aixtron AG, Aachen, Germany  
 AixACCT Systems GmbH, Aachen, Germany  
 Adria Airways, Ljubljana, Slovenia  
 Keko Varicon d.o.o., Žužemberk, Slovenia  
 'Jožef Stefan' Institute, Ljubljana, Slovenia