

Preface

The Summer School on “Layered, Functional Gradient Ceramics, and Thermal Barrier Coatings: Design, Fabrication and Applications” was organized as a final training activity of the European Research Training Network SICMAC (Structural Integrity of Ceramic Multilayers And Coatings), for which it meant the summit of its last three years work. The Summer School was aimed to disseminate and exchange knowledge on the *design, fabrication and reliability of layered ceramics, ceramic coatings and functionally graded ceramics in order to present an overview on the fundamentals in this area as well as an insight into critical issues and perspectives of these materials.*

The main topics can be divided in five different groups:

- design and processing of multilayers;
- functionally graded materials;
- structural integrity of multilayers;
- thermal barrier coatings: processing and lifetime assessment;
- fatigue, damping and high temperature behaviour of coatings and multilayers.

In the course of the Summer School 18 invited speakers presented 20 comprehensive talks, each focused in a specific area of this timely subject. Other 20 contributions were made by researchers and SICMAC young researchers in form of posters. Moreover, the Summer School provided plenty of space for discussions with an outstanding and diverse group of scientists at the forefront of research and helped to establish new professional contacts between participants.

It is my pleasure and honor to express my gratitude to all speakers, collaborators and participants for making the Summer School possible and successful. I would also like to thank all my colleagues from the RTN SICMAC for their collaboration during the period of its functioning. I am also grateful for the support of the European Community's Human Potential Programme under contract HPRN-CT-2002-00203, [SICMAC] and to the “Institut Menorquí d'Estudis” of Menorca for the support received in the organization of the event.

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