

## Referee Panels

### I. Advanced Synthesis & Characterization Techniques of Materials

<b>Chen Wen</b>	Wuhan University of Technology, Wuhan, P.R. China
<b>B. Chowdhury</b>	Matech Associates, Lake Ariel, USA
<b>S. Dann</b>	Loughborough University, Loughborough, UK
<b>M. Drábik</b>	Institute of Inorganic Chemistry, SAS, Bratislava, Slovakia
<b>M. Frumar</b>	University of Pardubice, Pardubice, Czech Republic
<b>T. Grygar</b>	Institute of Inorganic Chemistry, CAS, Řež, Czech Republic
<b>F. Hanic</b>	Institute of Measurement Science, SAS, Bratislava, Slovakia
<b>E. Kendrick</b>	Loughborough University, Loughborough, UK
<b>G. Krabbes</b>	Inst. of Solid State and Materials Research, Dresden, Germany
<b>A. Ray</b>	University of Technology, Sydney, Australia
<b>R. C. T. Slade</b>	University of Surrey, Guildford, UK
<b>V. Šepelák</b>	Institute of Geotechnics, SAS, Košice, Slovak Republic

### II. Structure & Electron Structure of Solids

<b>P. D. Battle</b>	Inorganic Chemistry Lab., Oxford, England
<b>R. Boča</b>	Slovak Technical University, Bratislava, Slovakia
<b>F. Hanic</b>	Institute of Measurement Science, SAS, Bratislava, Slovakia
<b>J. Kožíšek</b>	Slovak Technical University, Bratislava, Slovakia
<b>V. Langer</b>	Chalmers University of Technology, Göteborg, Sweden
<b>D. Reinen</b>	Universität Marburg, Germany
<b>F. Varret</b>	Université de Versailles, France
<b>M. T. Weller</b>	University of Southampton, Southampton, UK

### III. Chemistry of Glases

<b>M. Frumar</b>	University of Pardubice, Pardubice, Czech Republic
<b>M. Hartmanová</b>	Institute of Physics, SAS, Bratislava, Slovakia
<b>M. Jamnický</b>	Slovak Technical University, Bratislava, Slovakia
<b>M. Liška</b>	Trenčín University, Trenčín, Slovakia
<b>L. Němec</b>	Institute of Inorganic Chemistry, CAS, Řež, Czech Republic
<b>T. Nishida</b>	Kinki University, Kayanomori, Japan
<b>P. Slater</b>	University of Surrey, Guildford, UK

#### **IV. Novel Inorganic Materials**

<b>B. Chowdhury</b>	Matech Associates, Lake Ariel, USA
<b>M. Drábik</b>	Institute of Inorganic Chemistry, SAS, Bratislava, Slovakia
<b>D. Galusek</b>	Institute of Inorganic Chemistry, SAS, Bratislava, Slovakia
<b>S. Hoste</b>	University of Ghent, Belgium
<b>L. Interrante</b>	Rensselaer Polytechnic Institute, Troy, USA
<b>M. Jamnický</b>	Slovak Technical University, Bratislava, Slovakia
<b>T. Juestel</b>	Philips Research Laboratories, Aachen, Germany
<b>E. Pollert</b>	Institute of Physics CAS, Praha, Czech Republic
<b>G. Plesch</b>	Comenius University, Bratislava, Slovak Republic
<b>A. Ray</b>	University of Technology, Sydney, Australia
<b>R. Riedel</b>	TU Darmstadt, Darmstadt, Germany
<b>P. Schwendt</b>	Comenius University, Bratislava, Slovakia
<b>R. C. T. Slade</b>	University of Surrey, Guildford, UK
<b>J. W. Stucki</b>	University of Illinois, Urbana, USA
<b>P. Šajgalík</b>	Institute of Inorganic Chemistry, SAS, Bratislava, Slovakia
<b>K. G. Varshney</b>	Aligarh Muslim University, Aligarh, India

#### **V. Layered Compounds, Clathrates & Intercalates**

<b>Ch. Detellier</b>	University of Ottawa, Ottawa, Canada
<b>E. Jóna</b>	Trenčín University, Trenčín, Slovakia
<b>P. Komadel</b>	Institute of Inorganic Chemistry, SAS, Bratislava, Slovakia
<b>F. Kovanda</b>	Institute of Chemical Technology, Praha, Czech Republic
<b>I. Nerád</b>	Institute of Inorganic Chemistry, SAS, Bratislava, Slovakia
<b>J. L. Perez-Rodriguez</b>	Universidad de Sevilla, Sevilla, Spain
<b>J. W. Stucki</b>	University of Illinois, Urbana, USA
<b>D. Tunega</b>	University of Vienna, Vienna, Austria

#### **VI. Deposited Films & Surface Chemistry**

<b>H. Altenburg</b>	University of Applied Sciences, Steinfurt, Germany
<b>S. Chromík</b>	Inst. of Electrical Engineering, SAS, Bratislava, Slovakia
<b>S. Hoste</b>	University of Ghent, Belgium, Belgium
<b>J. Huran</b>	Inst. of Electrical Engineering, SAS, Bratislava, Slovakia
<b>G. Plesch</b>	Comenius University, Bratislava, Slovak Republic
<b>W. S. Rees</b>	Georgia Institute of Technology, Atlanta, USA
<b>G. Wahl</b>	TU Braunschweig, Braunschweig, Germany

## Preface

The International Conference on Solid State Chemistry, held in Bratislava from 7 July to 12 July 2002 was already the fifth conference since 1986. The original idea of the first organizers was to bring together the solid-state chemists from the west and east Europe in order to promote the co-operation of both, in that time, divided groups. The first Solid State Chemistry Conference, held in Karlove Vary, Czech Republic was a nucleus, which has grown over the years and resulted in a well established meetings organized biannually, either in Czech or Slovak Republic.

Solid State Chemistry 2002 conference (SSC2002) was organized in six sections. One hundred sixty eight participants from 26 countries of 4 continents listened to 12 plenary, 12 keynote, and 83 lectures. During the conference 117 posters were presented. The International Referee Panels recommended a total 100 papers to be published in this book of the series Solid State Phenomena. The subjects span from the theoretical approaches of the structure and properties of solids through a relatively complete range of experimentally-based papers (incl. advanced characterization techniques, chemical aspects of nano- and functional materials, but also chemistry of oxides, mixed oxides, zeolites, layered compounds and various catalysts, chemistry of glasses and cements, electrochemistry and molten salts) to that with practical applications (mostly ceramics, layered compounds of natural occurrence, deposited films of mixed oxides and light metals production). Grouping of the papers in the book reflects the sections of the conference :

- **Advanced Synthesis & Characterization Techniques of Materials,**
- **Structure & Electron Structure of Solids,**
- **Chemistry of Glasses,**
- **Novel Inorganic Materials,**
- **Layered Compounds, Clathrates & Intercalates,**
- **Deposited Films & Surface Chemistry.**

The sections covered almost all modern branches of solid-state chemistry, which attract the interest of scientists and almost in the same extent the producers of new materials and technologies. SSC2002 was endorsed by the Union of Pure & Applied Chemistry (IUPAC); the representative of IUPAC, Prof. Leonard Interrante, presented the IUPAC activity and delivered the plenary lecture on *Si-based ceramics from polymer precursors*. Further plenary lectures comprised: *Thick films of ceramic materials, superconducting and electro-ceramic materials* (H. Altenburg), *Catalytic conversion of hydrocarbons in zeolites from first principles* (L. Benco), *Ab-initio modeling of catalytic reactions on metallic surfaces* (J. Hafner), *Non vacuum based decomposition techniques for superconducting ceramic coatings* (S. Hoste), *Engineering and chemistry of glass melting process* (L. Němec), *Hydrothermally treated cement-based building materials - past, present and future* (A. Ray), *Precursor derived nonoxide ceramics* (R. Riedel), *Importance of chemistry in high-tech ceramics design* (P. Šajgalík), *Chemistry and tailoring of mineral-related materials* (R.C.T. Slade), *The effects of iron oxidation state on the surface and microstructural properties of smectites* (J.W. Stucki), *Examples of molecular switching in inorganic solids, due to temperature, light, pressure and magnetic field* (F. Varret). The plenary lectures covered each topic of the conference and were an excellent base for the discussions and certainly served as the hints for the further development in the field. Majority of plenary lectures appeared, as a result of both quality of the lecture and IUPAC sponsorship, in the special (November 2002, web access - [www.iupac.org/publications/pac/2002/index.html](http://www.iupac.org/publications/pac/2002/index.html)) issue of Pure & Applied Chemistry, an official journal of IUPAC.

Pavol Šajgalík,  
Milan Drábik,  
Štefan Varga,  
(Editors)

