

## XTOP 2004

The 7th Biennial Conference on High Resolution X-Ray Diffraction and Imaging – XTOP 2004 - was held in Congress Centre Floret in Průhonice, one of suburbs of Praha, from September 7–10, 2004. Czech and Slovak Crystallographic Association organized it in cooperation with Institute of Physics, Academy of Sciences of the Czech Republic, Praha, Masaryk University, Brno and Charles University, Praha. XTOP 2004 took place just after EPDIC IX (European Powder Diffraction Conference) organized in Praha by the same Association from September 2–5, 2004.

The XTOP 2004 was the part of a series of conferences taking place in Europe every 2 years. The conferences provide a wide range of topics including theory of X-ray scattering, high-resolution X-ray diffraction, X-ray reflection, grazing-incidence scattering, X-ray scattering from thin films and nanostructures, X-ray topography, X-ray phase contrast imaging and other X-ray imaging techniques and instrumentation for all these methods. XTOPs started with the first meeting in Marseille, France in summer 1992, but the idea originates already from the first X-ray topography-related meeting, held in Grenoble in 1990. Next conferences took place in Berlin / Gosen (Germany) 1994, Palermo / Torre Normanna (Italy) 1996, Durham (UK) 1998, Ustroń / Jaszowiec (Poland) 2000 and Grenoble and Aussois (France) 2002. These conferences extended the topic well beyond topography and incorporated other diffraction techniques, which emerged or developed mostly in connection with the availability of synchrotron radiation sources. The X-TOP conferences are now a well-established scientific exchange opportunity for the community concerned.

Following very good experience from the last XTOP 2002, also XTOP 2004 was combined with pre-conference tutorial lectures presented by experts in the field: „Imaging with hard synchrotron radiation“ (J. Härtwig, Grenoble), „High-resolution X-ray diffractometry: Determination of strain and composition“ (J. Stangl, Linz), „X-ray grazing-incidence scattering from surfaces and nanostructures“ (U. Pietsch, Potsdam) and „Hard X-ray optics“ (J. Hrdý, Praha).



J. Stangl, V. Holy



The scientific programme of the conference was divided into 11 sessions and 2 poster sessions. In all 147 papers were accepted, of these 9 were 45-minute long invited talks, 34 were qualified as 20-minute orals and 104 as posters. All posters were displayed for the whole meeting to ensure maximum exposure and interaction between delegates.

Taking account of helpful suggestions of members of the International Programme Committee next invited lectures given by prominent scientists were presented: „Coherent Diffraction Analysis of Dislocation Arrays in GeSi Thin Films“ (I. Robinson, Urbana), „X-ray Scattering of Nanostructured Soft Matter Films“ (W. de Jeu, Amsterdam), „Some Trends of Hard X-rays Synchrotron Radia-



V. Holý, Z. Šourek, A. Lang



A. Lang - 80th birthday celebration

tion Imaging“ (J. Baruchel, ESRF), „Overgrowth Phenomena Studied by Anomalous Scattering Combined with High-resolution Reciprocal Space Mapping“ (T. Schülli, Grenoble), „In Situ X-ray Studies of the Morphology, Organization and Internal Structure of Growing Nanoparticles“ (G. Renaud, Grenoble), „Femtosecond X-ray Diffraction“ (J. Wark, Oxford), „Magnetic Transmission Soft X-ray Microscopy: Looking Into Nanomagnetism at Short Length and Fast Time Scales“ (P. Fischer, Stuttgart), „X-ray Waveguides as Nano-focusing Devices“ (W. Jark, Trieste), and „X-ray Standing Wave Imaging“ (J. Zegenhagen, Grenoble). Most of the oral presentations, both invited as shorter ones, were followed by lively discussion. Also poster topics instigated a lot of interest and discussion could be heard not only during sessions but over an evening glass of beer, too. The full list of all contributions together with their abstracts are available among other things at the website <http://www.xray.cz/xtop>

During one session, Professor Andrew Lang, honorary guest of XTOP 2004, one of the pioneers of X-ray topography who gave his name of the popular topographic technique, celebrated his 80th birthday. Professor A. Authier was invited to review - in the celebration address - Professor Lang's career and his invaluable contribution to the development of our field.

We are going to continue the tradition of former XTOPs and a special issue of Journal of Physics D: Applied Physics will appear in 2005. As usual, it will not be just „Conference proceedings“. Papers were subject to full



J. Baruchel



L. Pina, J. Kub



Conference secretariat (on the right, V. Šourková, P. Řezáčová, M. Čerňanský)

peer review according to normal practice of J. Phys. D and only high-level original contributions from XTOP 2004 were accepted.

In total 147 official delegates and 8 accompanying persons from 16 countries of three continents attended our conference.

From these, 13 students and younger scientists from 8 countries – both from Western and Eastern Europe as well as from Latin America - were able to attend as a result of sponsorship from the IUCr, others were partially or totally supported thanks to the funds granted by other sponsors. Commercial exhibition included booths of all sponsors and the participants could get recent information on their new products. Stronger support was given by Bruker AXS and PANalytical, however all sponsors are thanked once more for their valuable contributions.

The general scientific and presentation standard of contributions was very high again and the large number of active participants is clear evidence of the high degree of continual interest shown in this field of science. The conference was highly appreciated by majority of the participants and we still receive e-mails with nice comments. Additionally, the efforts of all members of the local organizing committee were also a big factor in the success of this event.



A. Authier



W. de Jeu, G. Bauer

The XTOP 2004 ended with a conference dinner in the Prague Congress Centre with a splendid view of Prague Castle during the sunset.

During the meeting the Ad-hoc XTOP Committee assessed two proposals and decided to accept the invitation of Prof. Baumbach from the Institut für Synchrotronstrahlung at the Forschungszentrum Karlsruhe: next conference, XTOP 2006, will be organized in Germany.

*Zbyněk Šourek*