

Proceedings of the 14th European Powder Diffraction Conference

This special issue of Powder Diffraction offers a selection of contributions presented at the European Powder Diffraction Conference (EPDIC14) held in Aarhus, Denmark, 15–18 June 2014.

The EPDIC conferences started in Munich in 1991 and they are the only European conferences completely dedicated to the studies of polycrystalline materials by diffraction methods. Today the EPDIC conferences serve as the natural venue for the presentation of new developments in powder diffraction instrumentation, analysis and applications. The next conference, EPDIC15, will take place in Bari, Italy in 2016 and details of the EPDIC organization are found at: <http://epdic.unitn.it/index.html>.

A rich variety of topics were presented at EPDIC14, ranging from studies of energy materials to total scattering techniques and *in situ*, *in operando* studies. Major events were the plenary talks on Microstrain broadening (by Andreas Leineweber), Structure and microstructure of crystals formed in nature and new bio-inspired materials (by Boaz Pokroy), Accurate and reliable molecular crystal structures from XRPD and DFT-D (by Jacco van der Streek), X-ray and neutrons as tools for Li-battery research (by Christian Masquelier), Neutron diffraction (by Denis Kozlenko), and *In situ* diffraction studies of non-stoichiometry in correlated oxides (by Monica Ceretti). Honorary lectures presented by the winner of the EPDIC Young Scientist Award, Manuel Hinterstein (“Strain mechanisms in actuators: *in operando* investigation

of functional materials”) and the winner of the EPDIC Distinguished Powder Diffractionist Award, Daniel Louër (“Laboratory X-ray powder diffraction at the University of Rennes: an overview”) were of special interest. A short commemoration of the late Professor John Ian Langford (1935–2013) took place on the first day of the conference. Paolo Scardi described Langford’s contributions to powder diffraction in particular line-profile analysis as well as his interests and passions besides the powder diffraction and science.

The remainder of the program was organized in 12 micro-symposia, each providing two key-note lectures and contributed oral presentations as well as two poster sessions and the Lachlan’s Software Fayre. EPDIC14 attracted 286 registered participants from 22 countries thereby demonstrating the vitality of the powder diffraction community and the continued interest in diffraction methods and applications.

The guest editors of this special issue of Powder Diffraction:

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