Radiation Physics and Chemistry 175 (2020) 108985

Contents lists available at ScienceDirect

Radiation Physics and Chemistry

journal homepage: www.elsevier.com/locate/radphyschem

Editorial

Proceedings of the 17thInternational Conference on X-Ray Absorption Fine Structure (XAFS 2018)

On 22–27 July, 2018 the 17th International Conference on X-Ray Absorption Fine Structure XAFS 2018 was held in Kraków, Poland (xafs2018.com). This special issue of Radiation Physics and Chemistry is devoted to the publication of conference materials submitted by participants of XAFS2018. The XAFS2018 conference was attended by over 500 participants from 38 countries representing almost all continents (see Fig. 1).

The International Conference on X-Ray Absorption Fine Structure was held for the first time in Krakow (Poland), the oldest academic centre and also the historic capital city of Poland. Kraków is currently not only the most popular tourist destination in Poland but also a strong centre of science and innovation. It hosts the first synchrotron radiation facility in Central and Eastern Europe launched in 2015 at the Jagiellonian University (www.uj.edu.pl).

Polish National Synchrotron Radiation Centre "SOLARIS" (synchrotron.uj.edu.pl) is a third generation low-energy 1.5 GeV storage ring based on the most advanced multiple bend achromat (MBA) technology. Solaris storage ring has 12 straight sections and already two beamlines are operational and other 6 beamlines are in commissioning or construction stage. Currently, the most often used research technique at NSRS "Solaris" is X-ray absorption spectroscopy at PEEM/XAS beamline working in the photon energy range 200–2000 eV. The second operational beamline UARPES enables angle-resolved photoemission spectroscopy in the photon energy range 8–100 eV. The next two beamlines in the soft X-ray energy range, X-ray photoelectron spectroscopy (XPS) and X-ray magnetic circular dichroism (XMCD), are at the commissioning or advanced construction stage. Another four beamlines are in construction-design phase and among them is the second XAS beamline operating in hard X-ray range. The XAFS 2018 participants had the opportunity to visit this unique facility during the conference. The highlights of the scientific event were summarised in detail in the meeting report by Kwiatek and Glatzel (Kwiatek and Glatzel, 2019).

This special issue of *Radiation Physics and Chemistry* presents a total

Fig. 1. Group photo of XAFS 2018 participants (photo: Mazurkas).

https://doi.org/10.1016/j.radphyschem.2020.108985

Available online 27 May 2020

of 56 selected papers, representing the scientific results presented during the XAFS 2018 conference. These articles cover all topics of the XAFS conference, ranging from XAS methodology, including the upgrade of XAFS spectroscopy synchrotron beamlines or methodical aspects of XAS data processing, analysis or expansion, to the use of X-ray absorption spectroscopy in biomedical research. Besides, many research papers report results in the fields of material sciences, catalysis, nanotechnology or geoscience.

We believe that the papers in this special issue, presented at the International Conference on X-Ray Absorption Fine Structure XAFS 2018, will attract numerous readers and will collect a large number of citations.

Reference

Kwiatek, W.M., Glatzel, J.P., 2019. XAFS17 highlights XAS and related techniques. Synchrotron Radiat. News 32 (1), 1517. https://doi.org/10.1080/08940886.2019.1559594.

Maciej Kozak*
Department of Macromolecular Physics, Adam Mickiewicz University, Poznań, Poland
SOLARIS National Synchrotron Radiation Centre, Jagiellonian University, Kraków, Poland
E-mail address: mkozak@amu.edu.pl.

Wojciech M. Kwiatek
Institute of Nuclear Physics, Polish Academy of Sciences, Kraków, Poland

Maya Kiskinova
Elettra-Sincrotrone Trieste, Italy

Augusto Marcelli
INFN-LNF, Frascati, Rome, Italy
Rome International Center for Materials Science Superstripes, Rome, Italy

Sakura Pascarelli
European Synchrotron Radiation Facility, Grenoble, France
European XFEL, Schenefeld, Germany

* Corresponding author.