

Special Issue with Manuscripts from the Conference

PICO 2022, Seventh Conference on Frontiers of Aberration Corrected Electron Microscopy, Kasteel Vaalsbroek NL, 8 - 12 May 2022

After a Corona-related break and an online version of the meeting, the Seventh Conference on Frontiers of Aberration Corrected Electron Microscopy, was held in spring 2022 as an in-person event at Kasteel Vaalsbroek in the Netherlands near Aachen. In the meeting, we addressed recent advances in methods and applications for the study of solids in condensed matter research and the life sciences by the application of advanced electron microscopy techniques. Furthermore, we celebrated the 25th anniversary of the function and publication of the first aberration-corrected transmission electron microscope.

PICO 2022 was organised by the Ernst Ruska-Centre, a national infrastructure jointly operated by Forschungszentrum Jülich and RWTH Aachen University. Furthermore, the conference was supported by the European Microscopy Society (EMS) as an EMS extension meeting and the EMS best paper award ceremony was part of PICO 2022. The conference has attracted more than 190 participants from 25 countries throughout the world and the programme committee has put together an oral programme including 55 scientific keynote lectures. Because of travel restrictions, some of the keynote lectures had to be given in an online or prerecorded version. The evenings were filled by two poster sessions with many young researchers who presented their results.



The scientific programme of PICO 2022 contained a wide range of presentations focusing on recent advances in methods and applications for the study of structural and electronic properties of condensed matter by the application of advanced transmission electron microscopy techniques in solid state research and the life sciences. Topical issues of aberration corrected electron microscopy research on (1) advanced methods and instrumentation, (2) materials science applications, (3) dynamic phenomena and in-situ techniques, (4) cryo microscopy methods and applications, as well as (5) novel techniques and approaches were highlighted in keynote presentations given by leading invited experts.

The Wednesday programme of PICO 2022 was dedicated to the celebration of the 25th anniversary of aberration correction in electron microscopy. Knut Urban organized an exciting programme for this day and he gave an overview highlighting the developments and the contributions of the four pioneers Harald Rose, Max Haider, Ondrej Krivanek and himself. Nine lectures highlighted recent achievements in physical sciences, materials science and life science including high-resolution TEM and STEM applications, theory and modelling, in situ-experiments and the application of aberration correction in life science.



Further information:

<https://er-c.org/index.php/conferences/pico-2022/>

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