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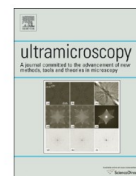
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Foreword

Foreword for the special issue on the tenth international workshop on low energy electron microscopy and photoemission electron microscopy



The Tenth International Workshop on Low Energy Electron Microscopy and Photoemission Electron Microscopy (LEEM/PEEM-10) was hosted in Monterey, California on September 11–15, 2016. This Workshop marked the 18th anniversary of the LEEM/PEEM series. The inaugural LEEM Workshop was organized by Ernst Bauer, the inventor of LEEM, and was held 1998 in Tempe, Arizona, USA. Since then this biennial series of meetings was held in locations rotating between America, Asia and Europe. The workshop series is designed to review the status of LEEM, PEEM, SPLEEM, XPEEM and related techniques, and to promote and disseminate applications of cathode lens microscopy to a broad audience of interested scientists. Highlighting the most recent scientific advances and instrumental developments, the LEEM/PEEM-10 meeting was attended by 114 researchers from 17 countries and featured sessions discussing new results on properties of surfaces, thin films, organic films, as well as surface chemistry, magnetism, time resolved methods and instrumental advances and novel applications of LEEM and PEEM to other subject areas.

The goals of the LEEM/PEEM workshop series include stimulating new research directions in cathode lens microscopy and attracting new colleagues towards using these techniques in their research. This motivates the traditions of inviting Distinguished Guest Lecturers from outside this community to report on advances and opportunities in closely related research areas, and the arrangement of a tutorial session preceding the general program, where leading experts highlight methods and opportunities. LEEM/PEEM-10 featured tutorials by Ernst Bauer on "Multimethod Analysis with Cathode Lens Electron Microscopy", by Hendrik Ohldag on "Synchrotron PEEM - A Look at Magnetism and Chemistry at Surfaces and Interfaces on the Nanoscale", and by Frank Meyer zu Heringdorf on "LEEM, PEEM and Pulsed Illumination". The inspiring Guest Lectures at LEEM/PEEM-10 included the talks: "A Golden Age of Space Exploration: Extraterrestrial Materials Research in the Laboratory" by Andrew Westphal, "Bringing the 'Real World'

into the Analytical Electron Microscope: Developments and Applications of in situ Microscopy to Materials Research" by Grace Burke, "Electrochemical Ion Insertion at the Mesoscale" by William Chueh, "Construction of Novel 2D Atomic Crystals on Transition Metal Surfaces and Physical Properties: Graphene, Silicene, Germanene, Hafnene, PtSe₂ and HfTe_n" by Hongjun Gao, "Electron Spin Resonance of Single Atoms on a Surface" by Andreas Heinrich, and "Symmetry-Broken Monolayer Superconductors" by Shuji Hasegawa. Aiming to attract and support young researchers to the field, LEEM/PEEM-10 also featured a "poster slam", an event in which eligible students competed for a prize. From a field of 15 outstanding contributions, Ka Man Yu from Hong Kong University of Science and Technology emerged as the well-deserved winner for presenting his work titled "Coupling of Rotation, Strain and Corrugation in sp²-bonded Layers on Metals".

The organizers of LEEM/PEEM-10 thank the LEEM/PEEM International Advisory Committee for valuable support and advice in planning the meeting. The organizers gratefully acknowledge generous support from the sponsoring businesses and organizations Elmitec, Specs, Focus, ScientaOmicron, Direct Electron, Surface Preparation Laboratory, Electronoptica, the Molecular Foundry and the Advanced Light Source of Lawrence Berkeley National Laboratory, as well as the SLAC National Accelerator Laboratory. The Guest Editors express their gratitude to the reviewers for their generous help and insightful advice on the articles published in this LEEM/PEEM-10 Proceedings Special Issue of *Ultramicroscopy*.

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