

Proceedings of 15th International Workshop
on Slow Positron Beam Techniques & Applications
(SLOPOS-15)

Prague, Czech Republic, September 2–6, 2019

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WARSAW

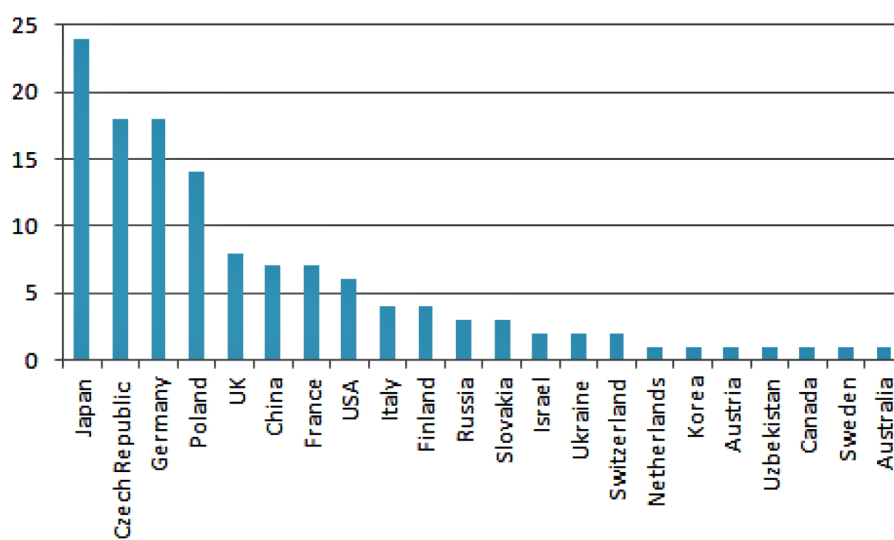
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Distribution of SLOPOS-15 participants among countries

Preface

These proceedings arose from the 15th International Workshop on Slow Positron Beam Techniques and Applications (SLOPOS-15), which was held at the Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic in the period September, 2–6 2019.

SLOPOS is a well established international workshop dedicated to variable energy slow positron beams, related techniques and all aspects of surface science and defect studies using positron beams. The workshop has a long term tradition and is being organized with period of three years at various places.

In total 129 delegates from 22 countries participated in the SLOPOS-15 (see figure on the opposite page). It is very encouraging for future development in the field that quarter of participants was Ph.D. students. The scientific program of SLOPOS-15 included 5 plenary lectures, 24 invited talks, 49 oral and 50 poster contributions. It was exciting and very impressive to learn about the latest achievements in the development of positron beams including large facilities, detectors and electronics, fundamental studies of positronium and antihydrogen, physics of surfaces as well as a broad range of applications of positron annihilation spectroscopy in condensed matter physics covering defect studies of bulk materials, thin films, surfaces, and interfaces.

The main topics of SLOPOS-15 comprised:

- positron and positronium beams and related technologies
- pulsed beams and positron traps
- positronium formation and emission
- positron interaction with atoms and molecules
- many positrons and anti-hydrogen
- defect depth profiling in bulk and layered structures
- characterization of thin films and nano structures
- porous materials
- surfaces and interfaces
- theoretical calculations of positron parameters
- digital processing of positron annihilation data

We are grateful to Andreas Wagner (Helmholtz-Zentrum Dresden-Rossendorf, Germany) for his brilliant summarizing talk of the workshop.

Three best poster contributions selected by voting of participants were awarded, i.e., the contributions presented by Shivani (Jagiellonian University, Poland), Eric Hirschmann (Helmholtz-Zentrum Dresden-Rossendorf, Germany) and Radek Zaleski (Maria Curie-Skłodowska University, Poland).

The participants of SLOPOS-15 visited the Center of Accelerators and Nuclear Analytical Methods (CANAM) of the Nuclear Physics Institute of the Czech Academy of Science at Řez (by courtesy of Anna Macková) and the Laboratory of positron annihilation spectroscopy at the Faculty of Mathematics and Physics of the Charles University.

The preparation of proceedings was overshadowed by sad news that professor Kelvin Lynn, who participated at SLOPOS-15 passed away in the beginning of 2020. Professor Kelvin Lynn was a leading figure in the field of positron annihilation and will be missed by the community for a long time.

The guest editors would like to dedicate these proceedings to professor František Bečvář, one of the pioneers of positron annihilation spectroscopy in the Czech Republic, who established positron annihilation at the Charles University and built unsurpassed high resolution positron lifetime spectrometers.

We are very thankful for the hard work of the Local Organizing Committee and for the valuable help of the International Advisory Committee. The guest editors would like to thank all authors contributing to the proceedings and also reviewers for their careful and excellent work. In addition, we highly appreciate helpfulness and professional approach of the publishing team of *Acta Physica Polonica A*.

Finally, we would like to thank all the attendees at SLOPOS-15 for their outstanding scientific contributions, for fruitful scientific discussions and in particular for the unique spirit which is characteristic for meetings of the positron annihilation community.

Jakub Čížek
Ivan Procházka
Guest editors