

Targets for accelerator-based research

Proceedings of the 26th World Conference of the International Nuclear Target Development Society

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Foreword

This special issue of the Journal of Radioanalytical and Nuclear Chemistry is dedicated to the 26th World Conference of the International Nuclear Target Development Society (INTDS 2012) held from August 19th to 24th, 2012 at the conference center Erbacher Hof in Mainz, Germany with special emphasis on targets for accelerator-based research. The INTDS 2012 was co-organized by the Johannes Gutenberg-Universität Mainz and the GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt. The 4th Target Fabrication Workshop (TFW), dedicated to targets for laser application and hosted by the Technical University Darmstadt, was held in parallel to the INTDS

2012 at the Erbacher Hof with common plenary sessions giving the participants of both events the opportunity of exchanging experiences and know-how. Accordingly, these proceedings contain some contributions presented at the 4th Target Fabrication Workshop.

The series of INTDS conferences dates back to 1963 when the “First Symposium on Research Materials for Nuclear Measurements” was held sponsored by the Central Bureau for Nuclear Measurements (CBNM, recently IRMM—Institute for Reference Materials and Measurements) in Belgium. Since then researchers involved in target preparation share experience and discuss related problems during biennial conferences hosted alternatively in Europe, North America and Asia (www.intds.org). It dates back to 1978 and 1988 when the 7th and the 14th INTDS conference were held at Garching, organized by Ludwig-Maximilians-Universität together with Technische Universität München and at Darmstadt, organized by GSI, respectively. Thus, it was delightful to meet again in Germany on the occasion of the 26th International INTDS conference.

More than 70 participating scientists from 15 countries (Belgium, Canada, France, Germany, India, Italy, Japan, Korea, Poland, Romania, Russia, South Africa, Switzerland, UK, USA), met in Mainz presenting over 50 scientific contributions covering the wide field of “Targets for Accelerator-based Research”. Two complementary visits to GSI and the TRIGA Mainz research reactor operated by the Johannes Gutenberg-Universität were included in the scientific program to introduce the institutions and laboratories.

The conference comprised seven different sessions titled “Classical Accelerator Targets”, “Laser- & Accelerator Based Research”, “RIB Targets”, “Isotope Enrichment and Medical Radioisotopes”, “Stripper”,

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“*Target Characterization and Metrology*”, and “*Actinide Targets*”. The sessions started with overview talks of experienced scientists followed by shorter contributions giving room to exciting new developments or methods, reports on improvements of established techniques, young scientists presenting their first scientific results as well as for introducing groups and laboratories newly joining the society.

The conference site, Erbacher Hof, combined accommodation, restaurant and conference room in a convenient way. It is situated right in the medieval part of Mainz which made it easy to socialize and discuss in varying groups. The Wednesday afternoon was dedicated to wine tasting in the vineyards located around the nearby small town of Essenheim. The day ended with a conference dinner taking place in a local restaurant. During the banquet the traditional INTDS Award of Recognition was presented to Scott Aaron from ORNL, Oak Ridge, USA, for his work on materials science of ceramic and cermet targets of enriched stable and radioactive isotopes, for serving on the Society’s Board of Directors, and co-organising the 19th World Conference in Oak Ridge in 1998. The award was handed in absentia, and was accepted by a colleague participating in the conference.

The organisers of the INTDS 2012 like to express their gratitude to GSI, Helmholtzzentrum für Schwerionenforschung, Darmstadt and to Johannes Gutenberg-Universität, Mainz.

We would also like to express our special thanks to the local organizing committee for their efficient management at the conference. Gratitude is also due to the members of the International Scientific Committees of the INTDS 2012 and the 4th Target Fabrication Workshop. The guest editors would in addition like to thank the staff of JRNC for their support and co-operation in the production of these proceedings. We look forward to 27th INTDS meeting, INTDS 2014, which will be hosted by RIKEN, Japan, in 2014.

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