

Joint ICTP-IAEA Workshop on Research Reactors for Development of Materials and Fuels for Innovative Nuclear Energy Systems



IAEA

International Atomic Energy Agency

06 November - 10 November 2017
Trieste, Italy

Further information:

Activity URL: <http://indico.ictp.it/event/7993/>

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Focus of the Workshop:

Research reactors (RR) represent a key component of the research and testing and infrastructure for understanding the irradiation effects of materials and fuels. This understanding is crucial for the development of future nuclear energy systems, many of which are based on new structural materials and fuels. Existing and planned RRs have or will have capabilities to perform a broad spectrum of R&D indispensable for the development of innovative power reactors.

The main purpose of the workshop is to provide participants with practical information and knowledge on use of RRs for R&D on development and testing of materials and fuels for nuclear energy systems. It also aims at providing a forum to share and discuss experiences, challenges, and lessons learned in the area of material testing. The workshop will present irradiation experiment fundamentals, an up-to-date status of capabilities of material testing reactors, and capabilities of related facilities.

Workshop Topics:

- Capabilities of Material Test Reactors (MTRs)
- Radiation Effects in Materials and Research Methods
- Overview of IAEA Publication, "Research Reactors for Development of Material and Fuels for Innovative Nuclear Energy Systems: A Compendium"
- Overview of non-critical facilities in support of development of Liquid Metal-cooled Fast Neutron Systems (LMFNS database)
- MTR Test Design, and Experiment Instrumentation
- Pre-Irradiation/Experiment Preparation Facilities
- Post Irradiation Examination Facilities
- Accelerated Screening of Irradiated Materials
- Possible Next Generation Reactors – Advanced Material Research Needs
- Qualifying Unique Coolants for Next Generation Reactors
- Material Testing in Pulsed Research Reactors
- Accelerator Testing of Materials – Complement and Comparison with MTRs
- The Role of Low Power Research Reactors in Material R&D
- External Beams in Reactor Material Research
- Methods in Irradiation Experiment Modelling

Proposed Audience:

The workshop is intended for engineers and scientists who are involved or are interested in joining material testing programs at research reactors. The workshop will provide an opportunity, especially for participants from developing countries, to initiate networking activities facilitating access to material research facilities and R&D programmes.

How to apply:

Online application:
<http://indico.ictp.it/event/7993/>

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Deadline:

25 July 2017



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