

EVT2404561 - Technical Meeting on Advanced Technology Fuels: Progress on their Design, Manufacturing, Experimentation, Irradiation, and Case Studies for their Industrialization, Safety Evaluation, and Future Prospects

28–31 Oct 2025
Vienna International Center
Europe/Zurich timezone

Overview

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The International Atomic Energy Agency is organising a Technical Meeting (TM) on **Advanced Technology Fuels: Progress on their Design, Manufacturing, Experimentation, Irradiation, and Case Studies for their Industrialization, Safety Evaluation, and Future Prospects**, bringing together participants from research organizations, nuclear fuel design organizations, nuclear power plant operators and engineering companies, regulatory bodies and technical support organizations, universities, and other organizations engaged in near- and mid-term ATF fuel development, design, manufacturing, licensing and operation for large and small water-cooled reactors.

In recent years, significant progress has been made, worldwide, on ATF development, qualification (testing and simulation) and industrial implementations, included successfully completed the IAEA Coordinated Research Project (CRP) T12032 on Testing and Simulation for Advanced Technology and Accident Tolerant Fuels (ATF-TS), which involved 29 partners from 22 Member States (MSs).

To present these advances and innovations and based on the advice of the members of the Technical Working Group on Fuel Performance and Technology, the IAEA is organizing a Technical Meeting on "Advanced Technology Fuels: Progress on their Design, Manufacturing, Experimentation, Irradiation, and Case Studies for their Industrialization, Safety Evaluation, and Future Prospects", that will serve as a platform to:

- Discuss the results of the CRP T12032 on ATF-TS,
- Assess the safety benefits and performance of ATFs,
- Identify gaps and challenges in ATF development, qualification and licensing,
- Explore future IAEA activities, including a new CRP on ATF testing and simulation including for Small Modular Reactors (SMRs).

This event will feature five main technical sessions, covering key aspects of ATF development, testing, modelling, safety analysis, and future applications.

1. Advances in ATF Materials and Manufacturing

- ATF cladding and fuel fabrication
- Coating designs and optimization
- Industrialization of ATFs and associated challenges

Speaker

 Ms Anzhelika Khaperskaia

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