

Webinar Invite

Join us on October 28, 2021, 8:30 am EDT (UTC-4)

Metal Fuel for Prototype Gen-IV Sodium Cooled Fast Reactor (PGSFR)

Fuel for the Prototype Generation-IV sodium-cooled fast reactor (PGSFR) is metallic fuel which has high thermal conductivity and excellent compatibility with sodium. U-Zr fuel is a driver for the initial core of PGSFR, and U-TRU-Zr fuel will replace U-Zr fuel later. U-TRU-Zr fuel will use TRU recovered through the pyro-electrochemical processing of spent PWR fuels, which contains highly radioactive minor actinides and chemically active rare earth elements as the carryover impurities. This webinar will explain the results and experiences of metal fuel development for PGSFR such as fuel design, fuel fabrication, development and fabrication of fuel components, and fuel verification tests. Fuel design is to determine the configuration, the dimensions and the materials of fuel components and fuel assembly to make sure fuel integrity and reactor safety during irradiation. Fuel rods were fabricated, and irradiation tests of them were performed in both the thermal and the fast research reactors. For higher performance, advanced cladding, FC92 and Cr barrier applied on cladding inner surface were developed, fabricated and tested in comparison with HT9. A fuel assembly was fabricated, and mechanical and hydraulic tests were performed.

Free webcast!



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Register NOW at:

<https://attendee.gotowebinar.com/register/8140044538494236941>

Who should attend:

R&D people, NDE operators,
Nuclear regulators, Managers,
Students, General public



Dr. Chan Bock Lee has been working at Korea Atomic Energy Research Institute (KAERI) since 1989. At KAERI, he worked in design, fabrication and post-irradiation examination of UO₂ fuel for the commercial PWRs in Korea. After that, he worked development of diverse fuels for PWR, research reactor and VHTR. Since 2007, he has worked on metal fuel development for SFR. He earned his BS and MS in Nuclear Engineering from Seoul National University in South Korea and his PhD in Nuclear Engineering from MIT. He served as Division Director of Fuel Development at KAERI, Chair of Nuclear Fuel and Materials Division in Korea Nuclear Society, and Co-Chair of OECD/NEA Nuclear Innovation-2050 Fuel and Fuel Cycle Subgroup.

Upcoming Webinars

18 November 2021
Geometry Design and Transient Simulation of a Heat Pipe Micro Reactor, Dr. Jun Wang, University of Wisconsin Madison, USA

December 15, 2021 Development of an Austenitic/Martensitic Gradient Steel Connection by Additive Manufacturing, Dr. Flore Villaret EDF, France

27 January 2022
ESFR SMART a European Sodium Fast Reactor Concept including the European Feedback Experience and the New Safety Commitments following Fukushima Accident, Mr. Joel Guidez, CEA