

8ICEG Invited Lecture



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Invited Lecture Title

Progress of High-level Radioactive Waste Disposal Program in China

[09:00 - 09:30 , Tuesday 30th Oct. 2018]

Biography

Dr. Chen obtained his Ph.D. in Civil Engineering from the University of Sciences and Technologies of Lille (USTL, France) in 2009. In September 2010, he became an associate professor in the Central University of Nantes in France. Dr. Chen returned to China and joined Beijing Research Institute of Uranium Geology (BRIUG) in 2011, working on the geological disposal program for High-Level Nuclear Waste in China. Now, he is the deputy director of High-level Radioactive Waste Disposal Division of BRIUG, responsible for international cooperation and R&D activities.

Abstract

With the rapid development of nuclear power in China, the disposal of high-level radioactive waste (HLW) becomes an important issue to the nuclear safety and environment protection. Deep geological disposal is internationally accepted as a feasible and safe way to dispose of HLW, and underground research laboratories (URLs) play an important and multi-faceted role in the development of HLW repositories. A three-step strategy is adopted in China for the HLW disposal program, namely the siting, the URL studies and the repository construction. In the presentation, the latest progress of siting process and URL project in China will be introduced. Based on the proposed strategy to build an area-specific URL, the Xinchang site in the Beishan area, located in Gansu Province of northwestern China, has been determined as the final site for China's first URL in granite. Since 2015, a series of investigations and tests have been conducted to characterize the deep geological, hydro-geological and mechanical properties of the site. Based on the achievements obtained from the characterization of the URL site, a preliminary design of the URL, which is a facility at a depth of 560 m below the ground surface, is proposed and in-situ tests to be carried out in the URL are planned.