



Canadian Nuclear Society / Société Nucléaire Canadienne

Chalk River Branch, c/o Dr. Blair P. Bromley, AECL-Chalk River Laboratories, Chalk River, ON K0J 1J0

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*“Supporting nuclear science and technology for over 25 years”
“plus de 25 ans de promotion de la science et de la technologie nucléaires”*

China's Nuclear Power Program

The Chalk River Branch of the Canadian Nuclear Society is pleased to welcome Dr. Jintong Li at the next CNS seminar. Dr. Li will be speaking about China's Nuclear Power Program.

China's nuclear power program was proposed and started in the early 1970s to address severe power shortage and logistic difficulties in the Shanghai area. In 1981, a proposal was made to build the China's first nuclear power reactor, a 300 MW unit in Qinshan, Haiyan County. Since that time, China generated 16 billion kilowatt-hours of electricity with nuclear power by 2000. The Chinese government has recently made a strong commitment to significantly increase its nuclear power capacity in the face of growing power demand and environmental issues in China. To date, there are a total of seven existing and approved nuclear power plants (NPP) with 8,000 MWe from 10 units. China has also planned to expand its nuclear power generation to 20 times the level of 2000 by 2040.

With Generation II and III technologies, China has been taking the approach of “diversity, learning and standardization”. It has imported reactors from Canada, France, Russia and the U.S. (as of the last contract in December 2006). CNP-300, CNP-600, CNP-1000 and CNP-1500 have subsequently evolved as the local designs. Since China has very limited reserves of uranium ore, it has been very focused on developing technologies of high fuel efficiency. China has therefore been working on developing leading-edge technologies in Generation IV reactors, along with allocating resources to develop fusion and hybrid fusion-fission reactor technologies.

Dr. Jintong Li is a Chemical Engineer in the Hydrogen Isotopes Technology Branch at AECL, Chalk River Laboratories, since July 2000. His current responsibilities with AECL include research and development of heavy water technology, hydrogen fuel cells, and nuclear hydrogen production. Prior to joining AECL, Dr. Li worked for four years in polymer, catalysis and supercritical fluid technologies at four different organizations in Australia and the U.S.A. Currently he is a member of CNS and the chair of education and public outreach committee within the Chalk River branch.

Dr. Li received his education in Chemical Machinery for his Bachelor and Master degrees from Tianjin University, China from 1981 to 1988. After a short period of work on solid liquid separation with Tianjin University, he obtained a Ph.D. in Chemical Engineering in a joint program between Tianjin University and Meiji University (Japan) from 1991 to 1995. The subject of his Ph.D. dissertation was “Gas Polymer Membrane Separation”, in part to address greenhouse emissions. He went to Australia and worked as a postdoctoral research associate with CSIRO in Melbourne on catalysis and microwave-assisted processes for organic synthesis from 1996 to 1997. Later, Dr. Li went to the U.S. and worked as a postdoctoral research associate with the University of Pittsburgh, University of Maine, and the University of Massachusetts, Amherst on supercritical fluid technology for heavy metal extraction, metal deposition, polymer phase separation and polymer expansion from 1997 to 2000. Dr. Li has numerous publications in the above areas and holds four patents pertaining to his work with AECL and other organizations.

Dr. Jintong Li
Chemical Engineer, AECL – Chalk River Laboratories

7:30 PM
Thursday January 25, 2007

Bennett / Mackenzie Room, J.L. Gray Centre
(Entry via rear security entrance)

Refreshments will be served – free admission - ALL ARE WELCOME
Further information: Blair Bromley at 584-8811 Ext. 3676, or 613-584-1518