

# ENERGY AND MATERIALS RESEARCH

December 06-07, 2017 Dallas, USA

## Why we need nuclear power plants?

**Bahman Zohuri**

University of New Mexico, USA

Some scientists are calling the nuclear power plants source of energy as 100 percent renewable energy and off course Environmentalists arguably are saying that is wrong approach, just because in the core of these plants there exist Uranium or Plutonium as fuel when we are talking about fission type nuclear power plants that they exist in grid today and producing electricity to the net. However, on the other side of spectrum where, researchers and scientist at national laboratories and universities around the globe that are working toward fusion program to achieve a breakeven are passionately argue that nuclear power plants of fusion type are totally clean so long as the source of energy come in form of two hydrogen isotopes such as Deuterium (D) and Tritium (T) as source of fusion reaction and driving energy from it. This is a dream that is too far away from reality of today's need and demand for electricity, yet is not out of scope of near future. Physics of Plasma for driving energy via Inertial Confinement Fusion (ICF) or Magnetic Confinement Fusion (MCF) agree with such innovative approaches.

## Biography

Bahman Zohuri is currently at the University of New Mexico as Associate Research Professor and Consultant at Sandia National Lab as well as Galaxy Advanced Engineering, Inc. a consulting company that he started himself in 1991 when he left both semiconductor and defense industries after many years working as a chief scientist. After graduating from University of Illinois in field of Physics and Applied Mathematics, he joined Westinghouse Electric Corporation where he performed thermal hydraulic analysis and natural circulation for Inherent Shutdown Heat Removal System (ISHRS) in the core of a Liquid Metal Fast Breeder Reactor (LMFBR) as a secondary fully inherent shut system for secondary loop heat exchange. All these designs were, used for Nuclear Safety and Reliability Engineering for Self-Actuated Shutdown System. He designed the Mercury Heat Pipe and Electromagnetic Pumps for Large Pool Concepts of LMFBR for heat rejection purpose for this reactor around 1978 where he received a patent for it. He then was, transferred to defense division of Westinghouse later, where he was responsible for the dynamic analysis and method of launch and handling of MX missile out of canister. He has later on joined Lockheed and Rockwell International working on Satellite system for SDI as well as working and developing sensor system on board for remote sensing as well GIS. He later on was a consultant at Sandia National Laboratory after leaving United States Navy. Dr. Zohuri earned his first Bachelor's in Applied Mathematics and his second one in Physics along with his Master's degrees in Physics from the University of Illinois and his second Master degree in Mechanical Engineering as well as his Doctorate in Nuclear Engineering from University of New Mexico. He has been, awarded three patents, and has published 32 textbooks and numerous other journal publications. Recently he has been involved with Cloud Computation, Data warehousing, and Data Mining using Fuzzy and Boolean logic.

bahmanz@aol.com

## Notes: