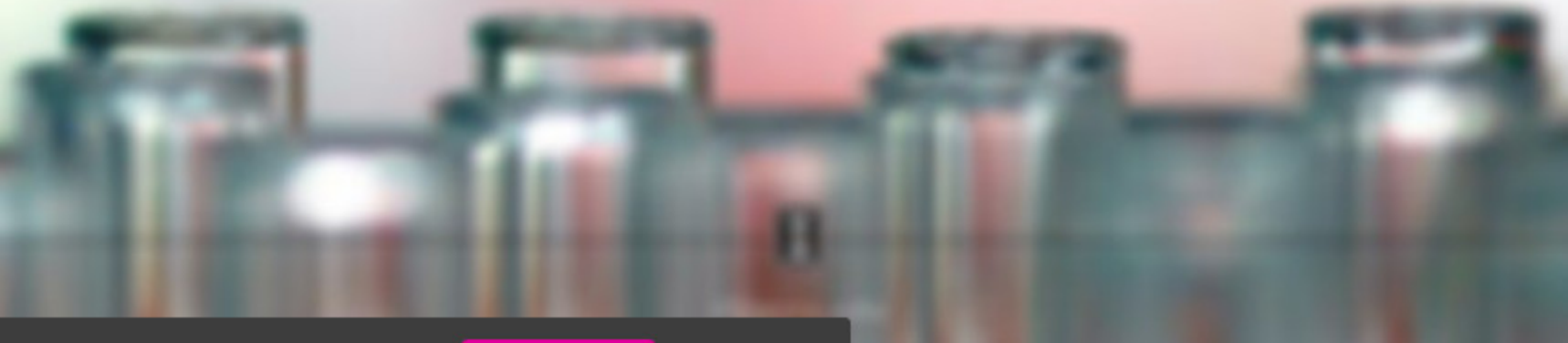
NPRE-470
Low Energy Nuclear Reaction Cell
Introduction to LENR Research

Dr. Kyu-Jung Kim

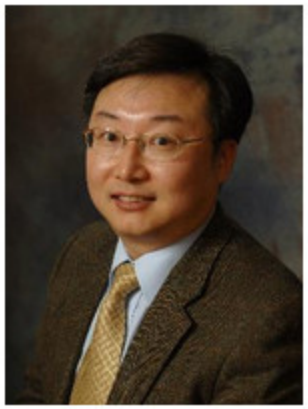
Department of
Nuclear, Plasma and Radiology Engineering
University of Illinois



Kyu-Jung Kim

illinois.edu

Department of Nuclear, Plasma, Radiological Engineering
University of Illinois at Urbana-Champaign



As a scientific and engineering researcher, Dr. Kim's research interest has been focused to make an actual contribution to solving the issues of global energy. Therefore his research areas have been centered on a various energyconversion system, such as fuel cell technology, which converts the chemical energy directly to the electrical power, metal hydride thermal energy conversion technology that upgrades heat or generate a chill use of heat by means of using the thermo-physical characteristic property of various types of metal hydride alloy that interact with hydrogen molecules. Dr. Kim's research experiencehas brought the 131 patents published, 41 patents issued. He was a chief researchengineer of a global major company; LG Electronics Inc., and managed projects with collaborations of international teams of academia in Japan, China, Russia and USA.

Research Field 1:

Direct Borohydride Feul Cell

2002 ~ 2007, LG Electronics Inc., Korea

2007 ~ Present, Nuclear, Plasma and Radiology Department, University of Illinois at Urbana-Champaign, IL

The DBFC has been the subject of his research since I started working as the chief research engineer in the digital appliance lab at LG Electronics, South Korea in 2002.

The DBFC is relatively new types of fuel cells that are currently in the developmental stage, compared to the hydrogen fuel cells that have been introduced and utilized for several scores of years. The DBFC uses borohydride, which is a water soluble chemical compound in solid form and abundant natural resources in US, as the fuel.

The designing of DBFC is much different from other types of fuel cells due to the electro-chemical reaction that requires direct contact of fuel and catalytic electrode, which directly generates electrical energy. The DBFC has