

Speaker Profile



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Dr. Yun Jung Lee

Post doctorate

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Dr. Lee is a postdoctoral fellow at Pacific Northwest National Laboratory (PNNL) in materials sciences department. She graduated with B.S. and M.S. in the department of inorganic materials science and engineering from Seoul National University in 1998 and 2000, respectively. Her major was electronic semiconducting materials. From 2000 to 2003, she was a research engineer at Samsung Electronics working on the semiconductor processing for DRAM capacitor. Then she switched gear to bio-inspired energy system and moved to Massachusetts Institute of Technology. She earned Ph.D. in 2009 on the nanostructured electrodes for lithium ion batteries using biological scaffolds.

Her current areas of research are focused on the development of new energy conversion and storage materials. Special emphasis is placed on the strategy to explore organic-inorganic interfaces and self-assembly. By controlling organic-inorganic interfaces, unique structures could be realized for high performance energy devices. Organic-inorganic interfaces include biomolecules-inorganic materials, for example virus-carbon nanotubes, and polymer-inorganic materials. Also she is working on the development of bio-inspired energy storage system using bio-mimetic membrane. Dr. Lee's research provides new lessons on how to convert the principles learned from nature into useful practical applications such as energy conversion and storage.