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Major : Environmental Engineering
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Since 1984, EERL has researched various treatment technologies to manage environmental pollution efficiently. Fundamental and practical researches include water, wastewater, and solid waste treatment by biological approaches. Our main research fields are anaerobic, aerobic, and membrane biotechnology. In the field of anaerobic treatment, novel process for methane/hydrogen production and wastewater/solid waste treatment have been developed. In other areas, new technologies such as nitrogen and phosphorous removal, submerged membrane bioreactor, and process automation are studied. Specifically, development of novel anaerobic treatment technology for clean bio-energy production, research on the optimal operation condition for nutrient removal using the UMBR (Upflow Multi-Layered Bioreactor), development of a hybrid-type vertical MBR (Membrane Bioreactor) process with thermophillically acidified sludge as a carbon source, and a high-rate anaerobic digestion system for fat-rich wastewater have been undertaken.

Education

- B.S. Civil Engineering, Seoul National Univ.
- M.S. Sanitary Engineering, Seoul National Univ.
- M.S. Environmental Eng., Pennsylvania State Univ.
- Ph.D. Environmental Eng., Pennsylvania State Univ.

Careers

- 1984~1987 Visiting Professor, AIT(Asia Institute of Technology), Thailand
- 1984~present Professor, Dept. of Civil & Env. Eng., KAIST
- 1993~1993 Visiting professor, Kyoto University, Japan
- 1994~present President, Korean Society of Environmental Engineers
- 1997~1997 Ebara Chair Professor, Hokkaido University, Japan
- 2002~2004 President, Korean society of environmental engineers
- 2002~2006 Director, Clean Water Research Center designated by KOSEF
- 2004~2006 President, Korean Federation of Water Sci. and Eng. Society

Research Interests

- Nutrient (Nitrogen & Phosphorus) Removal in Wastewater
- Anaerobic Digestion of Organic Wastes
- Membrane Technology and Membrane Bioreactor