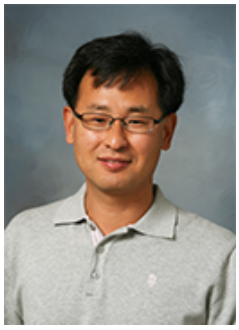
**Itra sensitive 30 nm thick SiN membrane pressure sensors**
$50,000 – Industry/University Cooperative Research Center for Water Equip and Policy




**Dr. Chung Hoon Lee** (principal investigator) and **Dr. James Richie**, associate professors of electrical and computer engineering in the Opus College of Engineering.

**Abstract:** Measuring liquid and steam pressure is a basic requirement for many industrial processes to operate safely, efficiently and with optimum quality control. This award will allow researchers to work towards the development of a low cost 30 nm thick silicon nitride membrane pressure sensor, which is ultrasensitive to pressure, for liquid application.

**A Continuous Heavy Metal Contaminant Measurement System in Drinking Water**
$50,000 – Industry/University Cooperative Research Center for Water Equip and Policy

**Dr. Chung Hoon Lee** (principal investigator) and **Dr. James Richie**, associate professors, and Dr. Henry Medeiros, assistant professor of electrical and computer engineering, in the Opus College of Engineering.

**Abstract:** The goal of this project is to develop a static and non-interfering heavy metal contaminant sensor that makes continuous measurements for a heavy metal contaminant (Pb) in water using an AC magnetic field generated by RF resonator. A previous project showed that the detection limit of our technology is about 5 ppb of Pb concentration in water. The goal is to develop micro/macro sensors to detect 1 ppb Pb concentration continuously in city water.

https://today.marquette.edu/2021/01/faculty-and-staff-grants-november-2020/