SEPAREL®

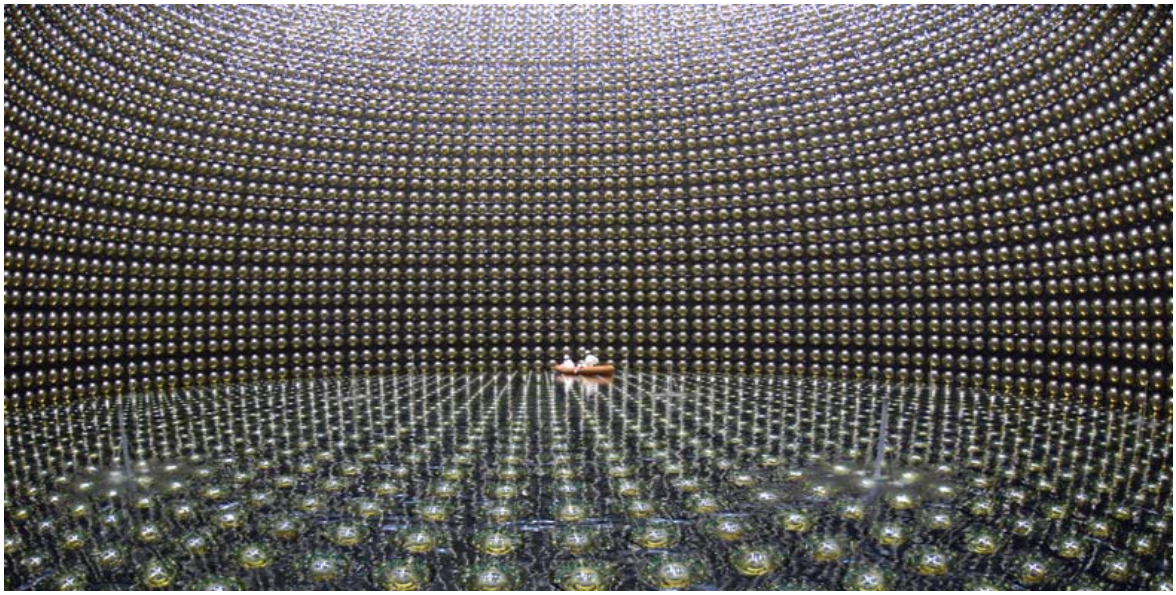
Hollow Fiber Membrane Module

The Super-Kamiokande Detector uses SEPAREL® for Gas Removal and Professor Kajita Receives the 2015 Nobel Prize in Physics

On October 6, 2015, Professor Takaaki Kajita of the University of Tokyo was warded the 2015 Nobel Prize in Physics for using the Super-Kamiokande Detector to discover neutrino oscillations, which confirm that neutrinos are not massless as previously believed.

The Super-Kamiokande Detector consists of a stainless steel tank filled with 50,000 tons of ultrapure water and 11,129 photomultiplier tubes on the tank wall. The ultrapure water in the tank is continuously reprocessed in a circulation system to reduce the number of particles larger than 0.1 micrometer to 100 particles per cubic centimeter. Additionally, small dust and bacteria particles, ions, and radon are removed to reduce scattering of Cherenkov Radiation, a blue light caused by particles travelling faster than the speed of light, and background noise.

DIC's hollow fiber membrane degassing module, **SEPAREL®**, assists the removal of dissolved gases, especially radon and oxygen, in the ultrapure water production required by the Super-Kamiokande Detector.



Super-Kamiokande detector

Photo courtesy of Kamioka Observatory, Institute for Cosmic Ray Research, University of Tokyo

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