Session Title:

Name: FUJIKAWA Shigenori

Position: Distinguished Professor

Abstract title:

Research and Development of CO_2 Circulation System for Realization of a "Beyond Zero" Society"

Abstract text (within 100 words):

Direct CO_2 capture from the air (direct air capture, DAC) is one of negative emission technologies that are expected to keep global warming below 1.5 °C. CO_2 capture by permselective membranes is advantageous because of its smaller and simpler set-up. We have developed highly CO_2 permeable nanomembrane which could separate diluted CO_2 from N_2 stream at the ambient condition. CO_2 capture by membrane separation has no restrictions on the point of installation when implemented in society. This ubiquity of CO_2 capture is an advantage of membrane separation, given that air can be found anywhere on the earth.