

# Fujikawa Shigenori

## **Position/Department/Division/Institution/Organization**

- Distinguished Professor/International Institute for Carbon Neutral Energy Research/Kyushu University
- Director/Research Center for Negative Emissions Technologies / Kyushu University

## **Country**

Japan

## **Career history**

### **1999 - 2000**

- Research Fellow of the Japan Society for the Promotion of Science  
Department of Chemistry, Yale University (US)

### **2000 - 2007**

- Special Postdoctoral Researcher (2000-2004), Frontier Researcher (2004-2007)  
Topochemical Design Laboratory. Frontier Research System, RIKEN (JAPAN)

### **2004 - 2008**

- Deputy of Laboratory Head  
Innovative Nanopatterning Research Lab., Frontier Research System, RIKEN (JAPAN)

### **2007 - 2009**

- Team Leader  
Nanocompartment Engineering Lab., Advanced Science Institute, RIKEN (JAPAN)

### **2007 - Present**

- Co-founder and Board Member  
NanoMembrane Technologies Inc. (JAPAN)

### **2008 – 2012**

- Deputy of Laboratory Head  
Interfacial Nanostructure Research Lab., Innovation center, RIKEN (JAPAN)

### **2011-2021**

- WPI-Associate Professor  
International Institute for Carbon Neutral Energy Research, Kyushu University (JAPAN)

### **2021-Present**

- Distinguished Professor  
International Institute for Carbon Neutral Energy Research, Kyushu University (JAPAN)
- Director

Research Center for Negative Emissions Technologies, Kyushu University (JAPAN)

## Awards/Publications

### Award

- ISIT Nanotechnology award, Japan (2015)
- The Nanofabrication Technology award of International Nanotechnology Exhibition and Conference (2007)
- Gordon Bell Prize Honorable Mention (2006)

### Selected Publications

- Fujikawa, S.; Selyanchyn, R.; Kunitake, T. A New Strategy for Membrane-Based Direct Air Capture. *Polym. J.* **2021**, 53 (1), 111–119.
- Baek, H.; Kashimura, K.; Fujii, T.; Tsubaki, S.; Wada, Y.; Fujikawa, S.; Sato, T.; Uozumi, Y.; Yamada, Y. M. A. Y. M. A. Production of Bio Hydrofined Diesel, Jet Fuel, and Carbon Monoxide from Fatty Acids Using a Silicon Nanowire Array-Supported Rhodium Nanoparticle Catalyst under Microwave Conditions. *ACS Catal.* **2020**, 10 (3), 2148–2156.
- Selyanchyn, O.; Selyanchyn, R.; Fujikawa, S. Critical Role of the Molecular Interface in Double-Layered Pebax-1657/PDMS Nanomembranes for Highly Efficient CO<sub>2</sub> /N<sub>2</sub> Gas Separation. *ACS Appl. Mater. Interfaces* **2020**, 12 (29), 33196–33209.
- Fujikawa, S.; Ariyoshi, M.; Selyanchyn, R.; Kunitake, T. Ultra-Fast, Selective CO<sub>2</sub> Permeation by Free-Standing Siloxane Nanomembranes. *Chem. Lett.* **2019**, 48 (11), 1351–1354.
- Selyanchyn, R.; Fujikawa, S. Membrane Thinning for Efficient CO<sub>2</sub> Capture. *Sci. Technol. Adv. Mater.* **2017**, 18 (1), 816–827.

## Areas of expertise

Nanomaterial chemistry, Membrane separation, Surface chemistry