



# Membrane Technology for Carbon Neutrality

**NGK Europe GmbH**

Executive Director

Koichi Ito

# Company Overview

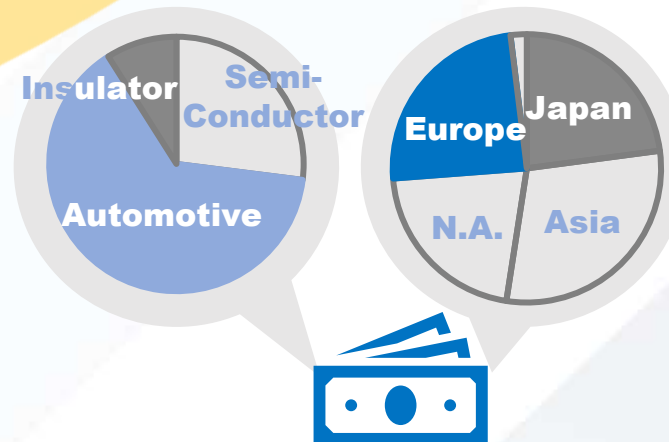


NGK INSULATORS to become

# NGK

**A Company  
to contribute to  
Carbon Neutrality  
& Digital Society  
with unique  
Ceramic Technologies**

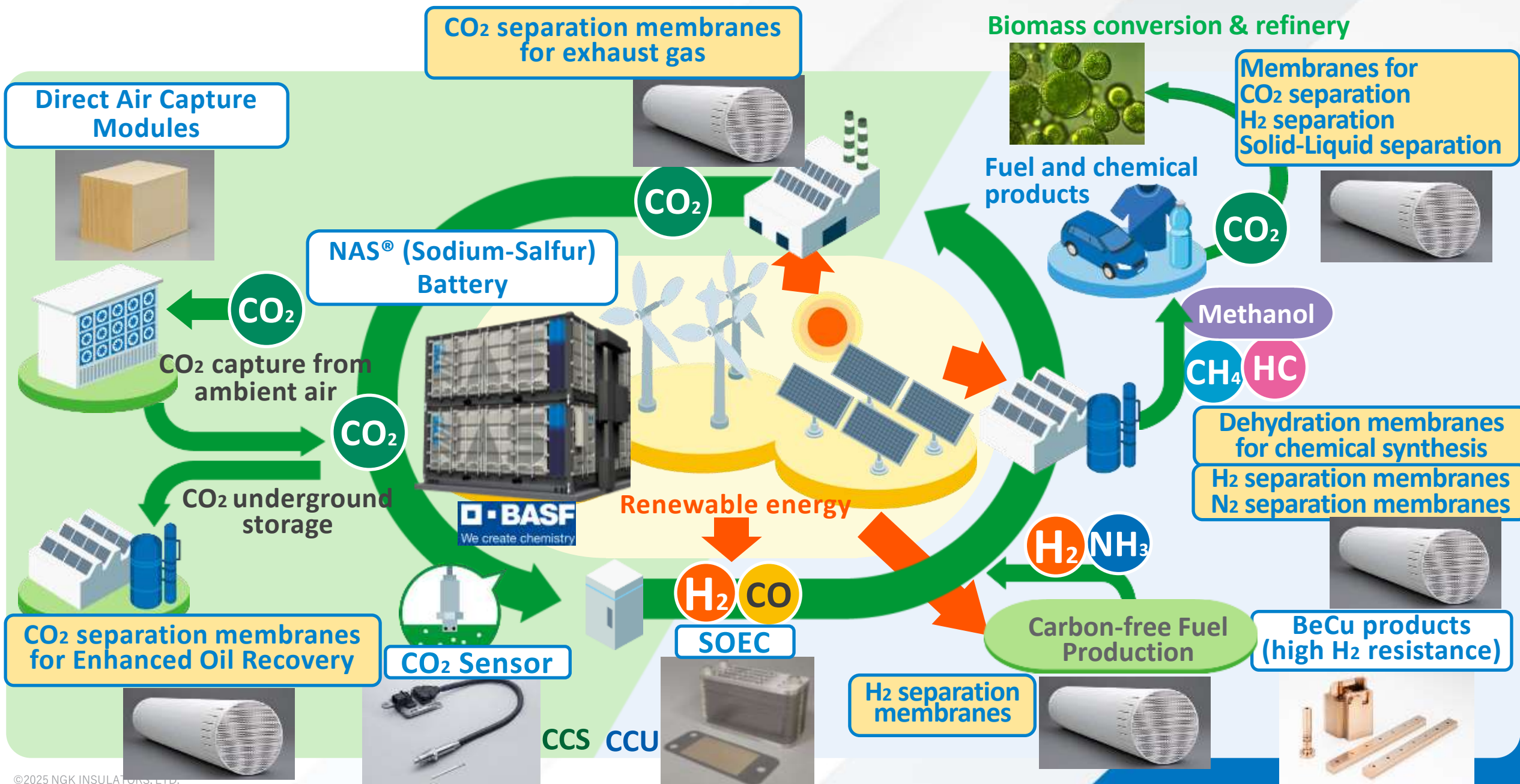
**Nippon** = Japan  
**Gaishi** = Insulator  
**Kaisha** = Company



**BORSIG** to join NGK Group

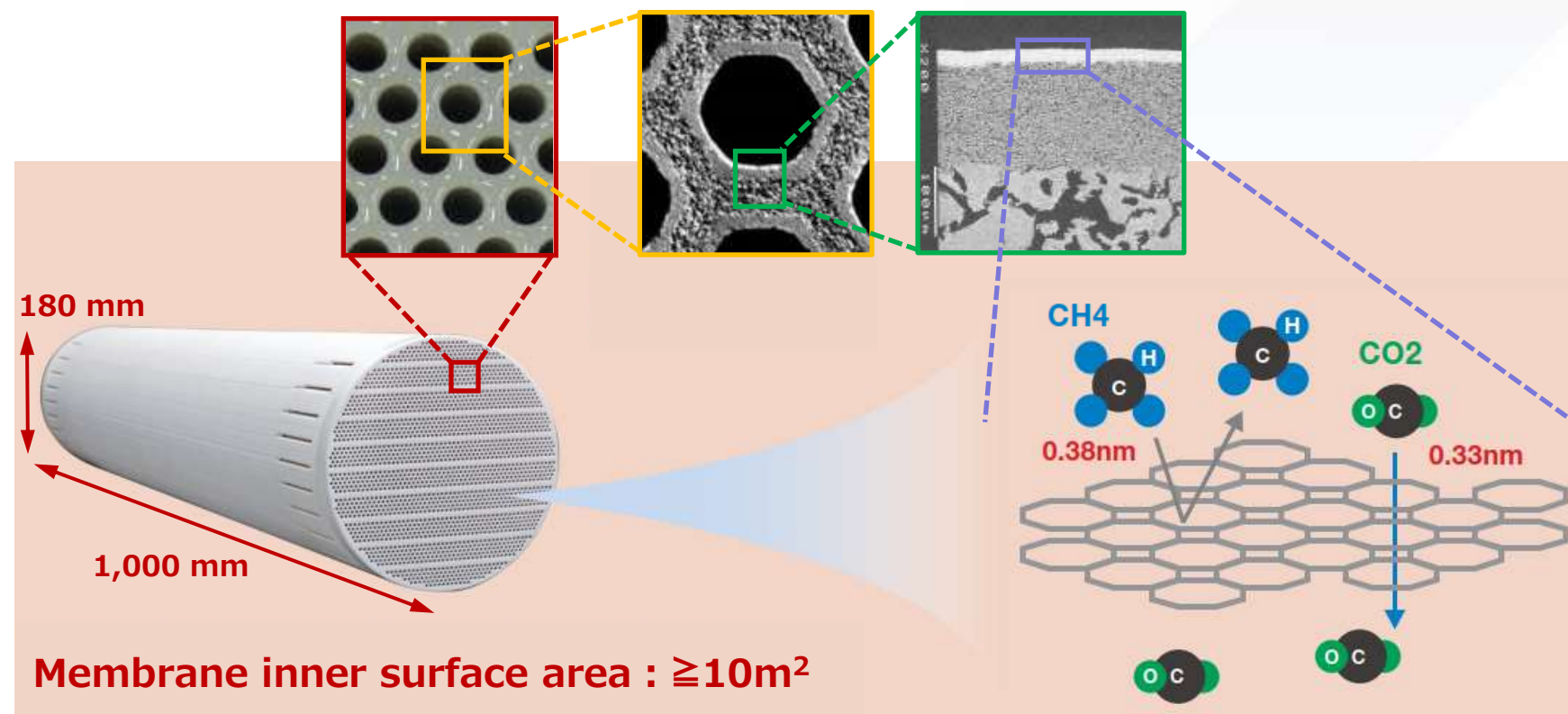


**Founded in 1919** **HQ in Nagoya, Japan** **€3.78bio Net Sales** **20,000 Employees** **47 Companies**



# Sub-nano Ceramic Membrane

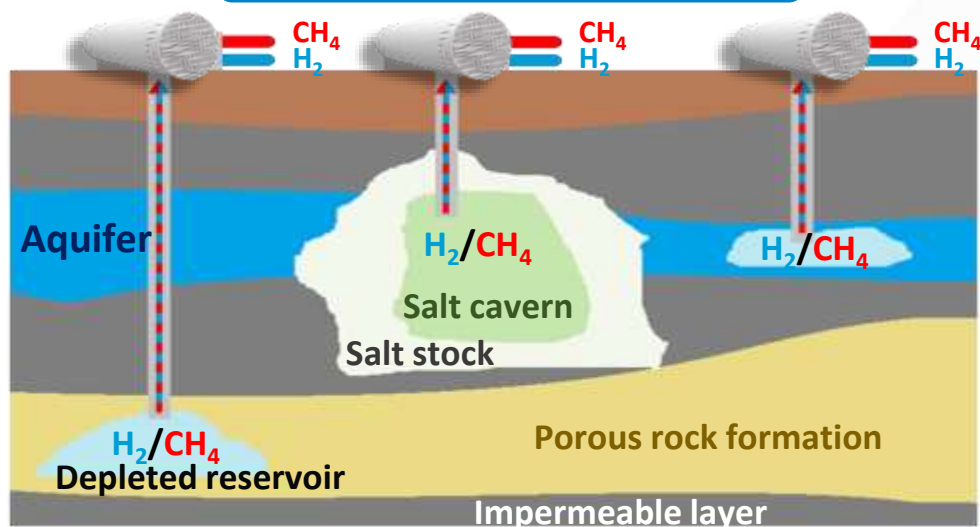
- Uniform pores under 1-nanometer enable **molecular-level separation**.
- Only NGK can make big monolith with **low defect ratios and high throughput**.
- Membrane separation: **Most energy efficient**.
- Ceramic: **Highly durable under pressure, resistant to heat and corrosion**.



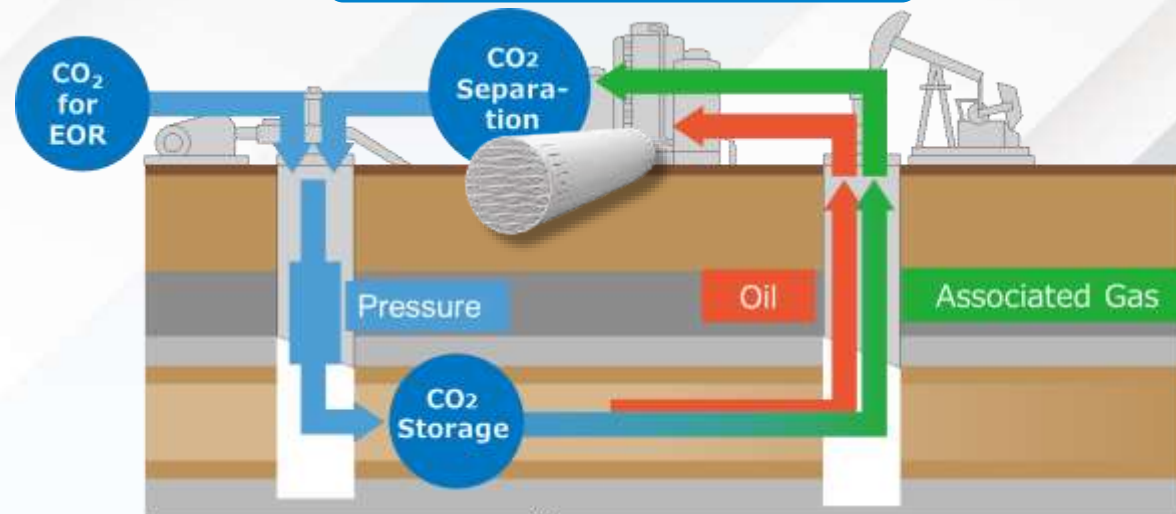
# Solutions for Carbon Neutrality

Terrific Separation Performance by High Selectivity!

Underground H<sub>2</sub> Storage



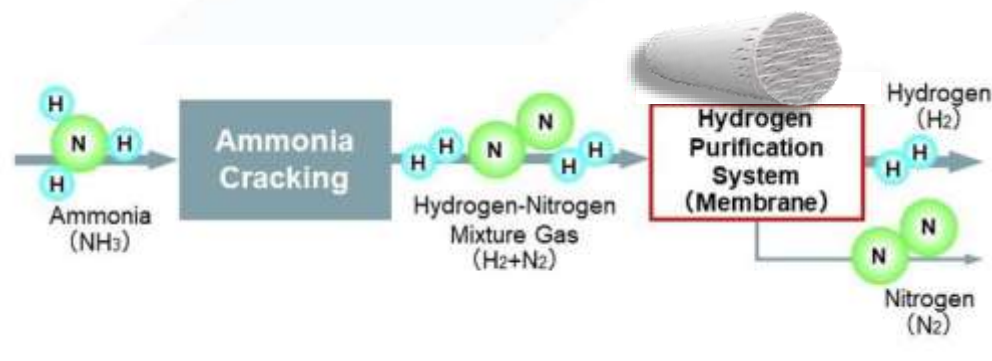
Underground CO<sub>2</sub> Storage



H<sub>2</sub> Blending in NG Pipelines



NH<sub>3</sub> as H<sub>2</sub> Carrier



Pervaporation Dehydration





# NGK INSULATORS

Surprising Ceramics.



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[Sub-nano Ceramic Membranes](#)



[NAS® Batteries](#)

**NGK Europe GmbH**

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