

Hydrogen
storage
alloy

HYDROLUX Inc.

hydrolux.co.kr

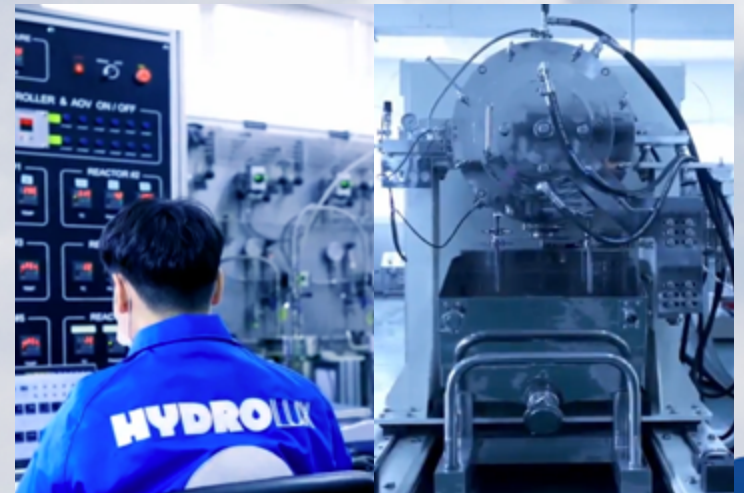


HYDROLUX

English

Hydrolux is dedicated to researching, developing, and commercializing hydrogen storage alloy to ensure secure hydrogen storage within the hydrogen economy's value chain.

With our technology, we're able to store more hydrogen per unit volume than conventional storage methods, all while enhancing safety by utilizing lower pressure at room temperature



HYDROLUX

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Hydrolux Vision

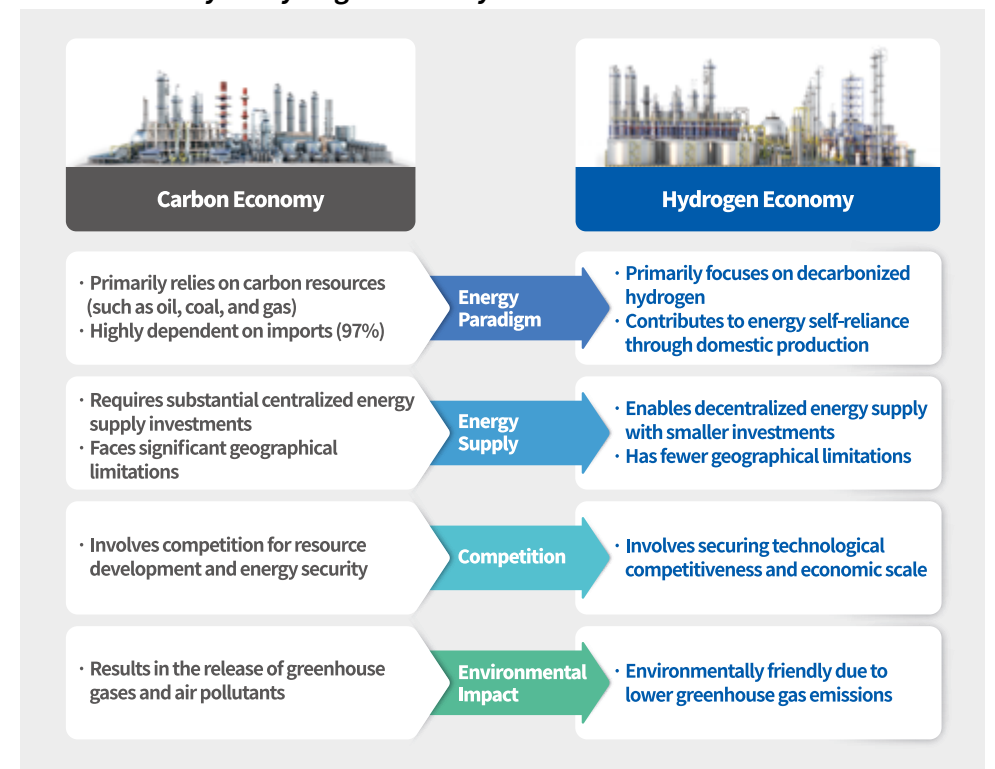
The competitiveness of hydrogen energy heavily relies on the relatively high costs of storage and transportation infrastructure compared to other energy sources. Hydrolux has successfully secured essential technologies and expertise for all three processes : 1) the conceptual design of hydrogen storage alloys, 2) alloy manufacturing, and 3) initial activation



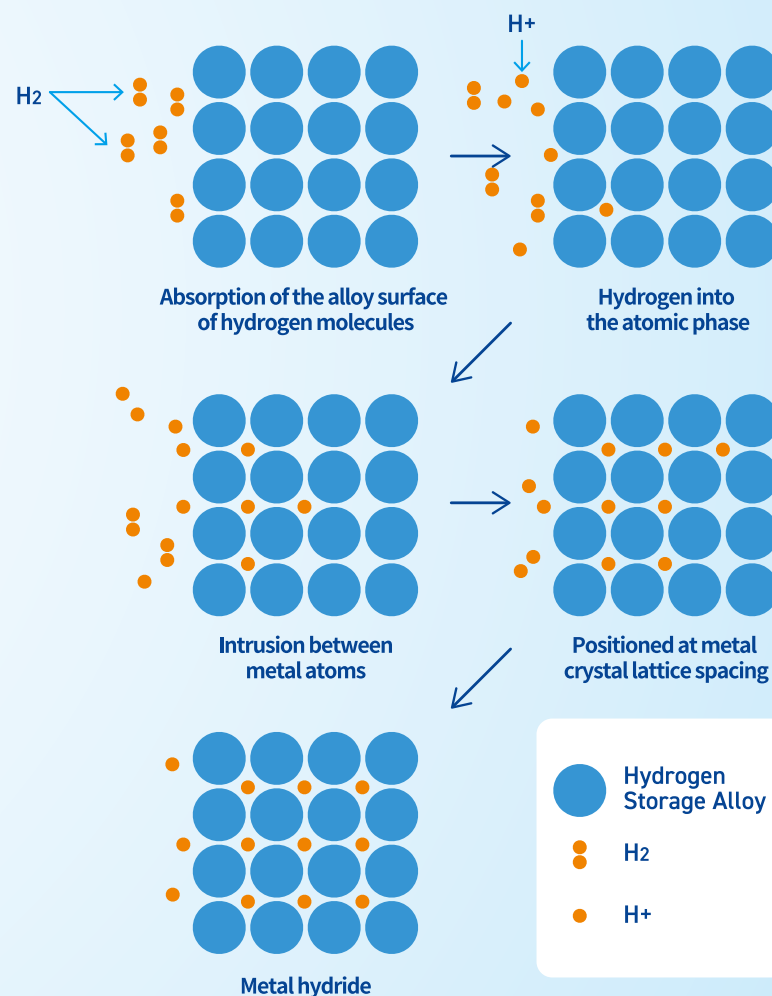
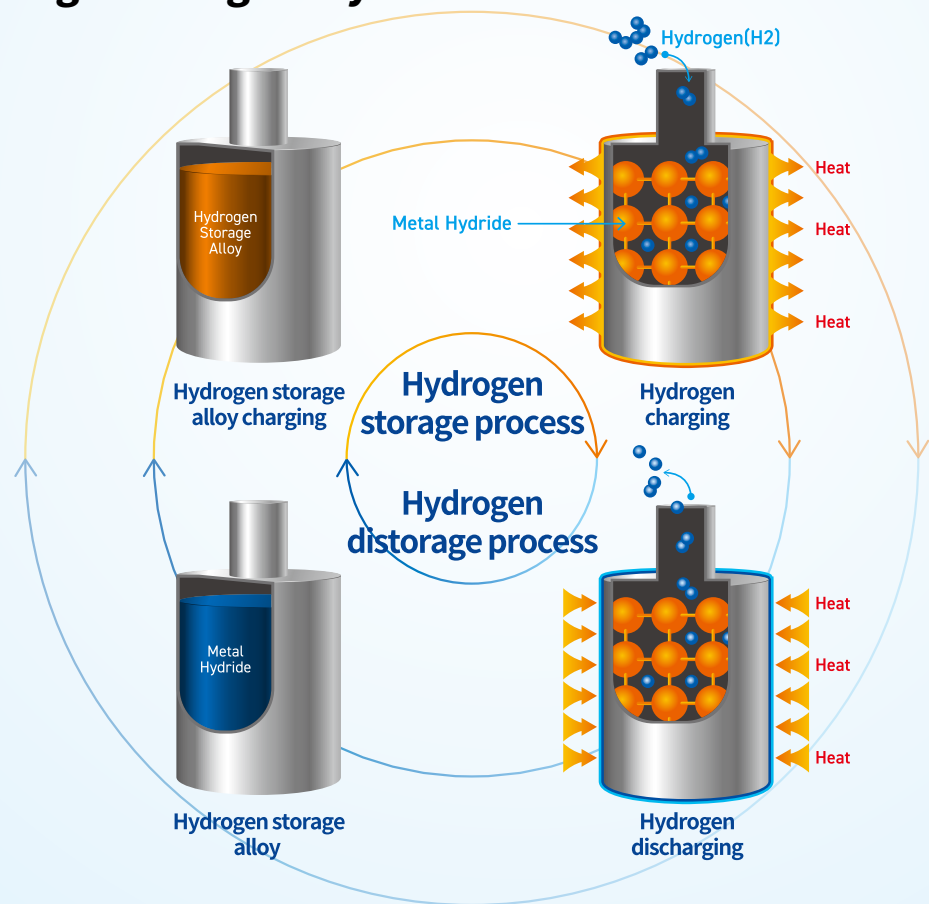
Embracing the Hydrogen Economy Paradigm

- Amidst the global push for carbon neutrality the hydrogen economy encompasses an economic and industrial sector that makes hydrogen its primary energy source.

Carbon Economy vs. Hydrogen Economy



Storage and distorage of Hydrogen storage alloy



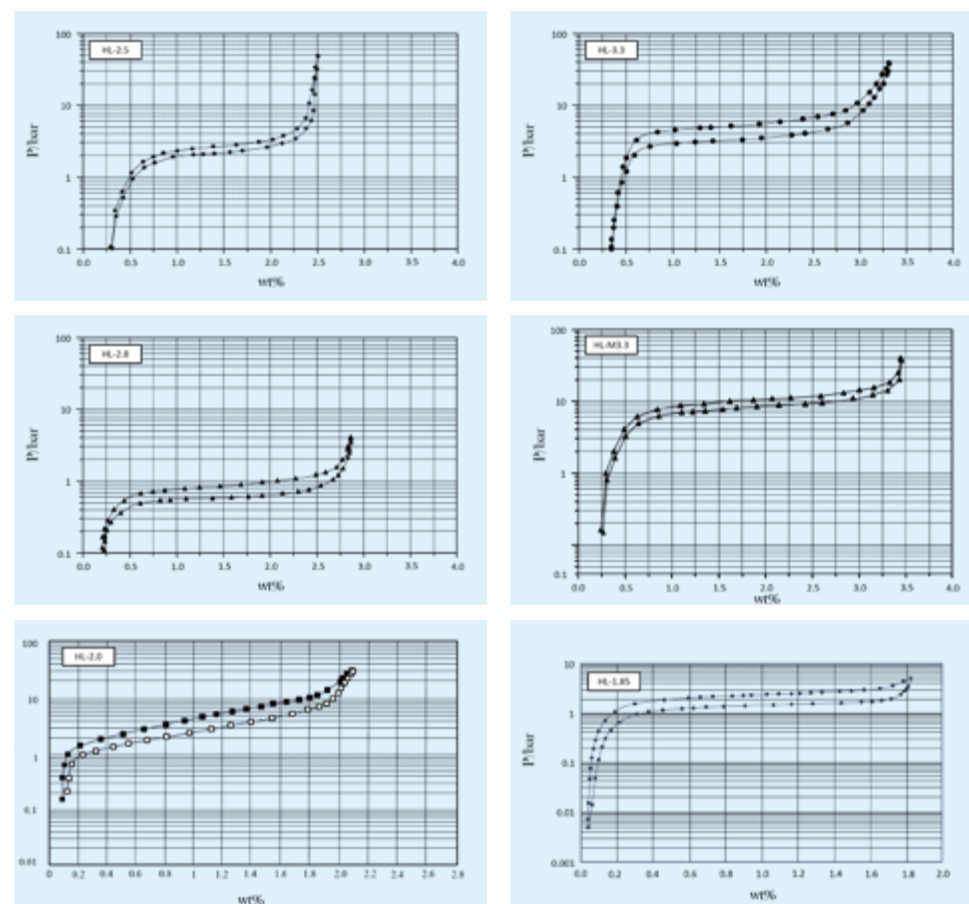
Hydrogen storage alloy solution



Hydrolux Hydrogen Storage Alloy Products

Number	Product	Hydrogen Storage Alloy Type	Hydrogen Storage (wt%)	Operation Temp(°C)	Plateau Pressure(atm)
1	HL-M3.3	BCC	3.3	30	10
2	HL2.0	AB2	2.0	20	2
3	HL2.5	BCC	2.5	20	2
4	HL3.3	BCC	3.3	40	4.5
5	HL2.8	AB2	2.8	20	9
6	HL1.85	AB2	1.85	20	17

Hydrolux Hydrogen Storage Alloy Products - PCT

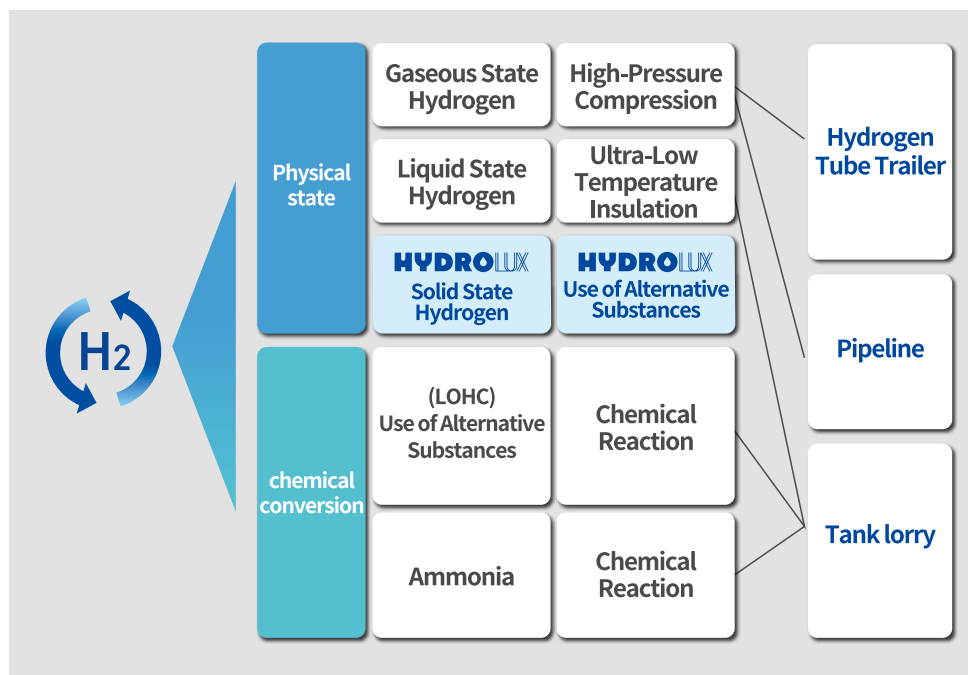




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Storage and Transportation Methods for Hydrogen

In theory, solid-state storage provides storage at room temperature, low pressure, and high capacity, and our research in this area is ongoing. Despite its strong stability, the use of solid hydrogen was limited. HydroLux's technology is actively expanding its range of applications.



Business Development Directions

Summary of Hydrogen Storage System Development Approach(HL 2.0 , 10Bar)

Product.	Cylinder Size	Hydrogen Capacity	Alloy Weight	Type
HL Power 0.1K	1L	0.1kg	5.6kg	mobile type
HL Power 1K	5L (4ea.)	1 kg	56kg	mobile type
HL Power 10K	47L (4ea.)	10 kg	560kg	a fixed form
HL Power 100K	862L	100 kg	over 5.6ton	a fixed form

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