Under Development

CO_2 capture and storage material

Sodium Ferrite for CO_2 Solid Sorbent

OVERVIEW

TODA KOGYO has developed sodium ferrite, $NaFeO_2$, using our synthesis technology. The $NaFeO_2$ can capture CO_2 in combustion exhaust gas and release it when heated to about 100℃.
It is a reusable solid material that contributes to carbon neutrality.

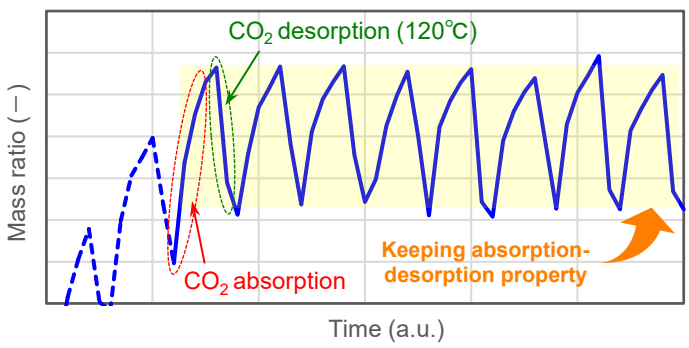
FEATURES

Easy-to-control thermal swing absorption (TSA) process	CO_2 is captured at 0-50℃ and released when heated to about 100℃.
Possible to utilize recovered CO_2	Since CO_2 is selectively chemisorbed, highly pure CO_2 can be obtained.
Chemically stable material	$NaFeO_2$ is an inorganic, VOC-free, and non-oxidizing material.

CHARACTERISTICS

【Characteristics】

	$NaFeO_2$	CO_2 solid sorbent (ex.)
Shape	Powder	Pellet
$NaFeO_2$ content	100wt%	30-70wt%
CO_2 absorption temperature	0-50℃	0-50℃
CO_2 desorption temperature	90-120℃	90-120℃
CO_2 sorption amount	13wt%	2-8wt%



【Continuous CO_2 absorption-desorption property of $NaFeO_2$ pellet】

APPLICATIONS

- CO_2 separation and recovery in combustion exhaust gas
- Control of CO_2 concentration in a room
- Utilizations of recovered CO_2 for energy or raw material for chemical synthesis, etc.

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