

# Energy Conversion and Energy Storage

**R&D Project Title:** Innovative ammonia cracking using vacancies as reaction sites

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## Summary :

In this R&D project, we aim to develop an energy-saving ammonia cracking system by using nitride-based precious metal-free catalysts, in which nitrogen vacancies function as active site for ammonia decomposition. In addition to controlling the reactivity of electrons generated at nitrogen vacancy sites, we will also consider controlling the reactivity using heat and microwaves.

Our ammonia cracking system will contribute to carbon neutrality by converting inexpensive green ammonia produced overseas into hydrogen with high efficiency and energy saving.

