Mehr Licht!
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#D13

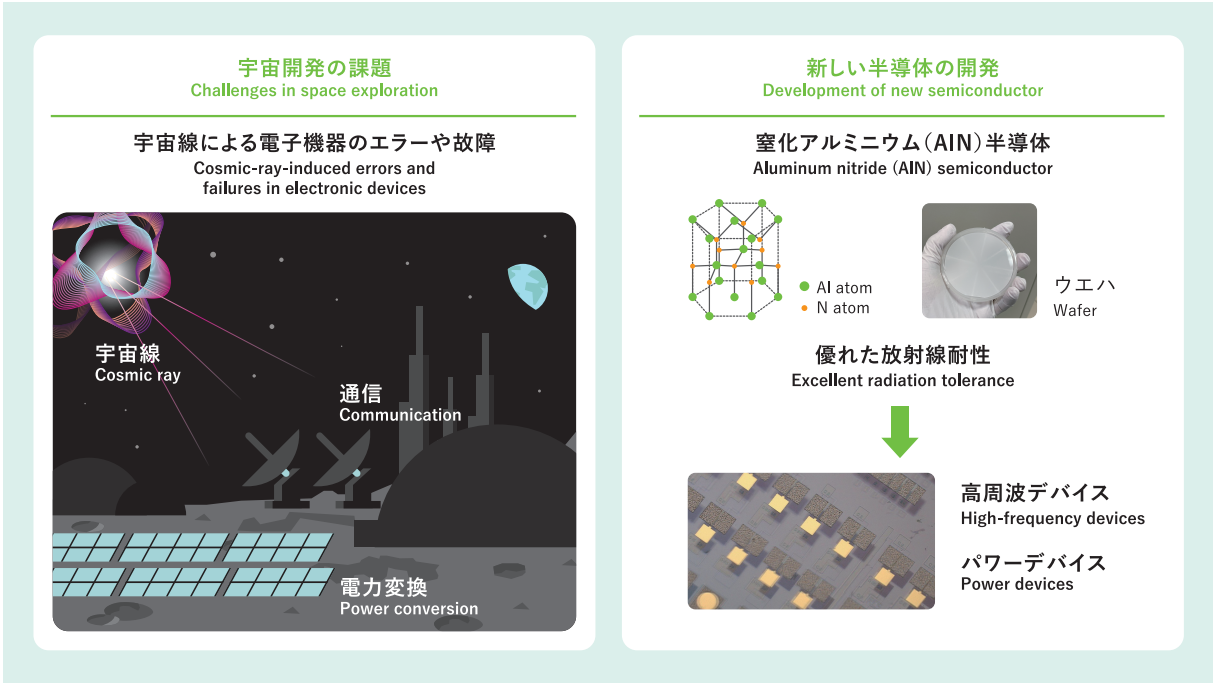
#Safety and Security#Resilience

Space-Radiation-Tolerant Semiconductor

Reliable operation of devices on the Moon for over 1,000 years

Technical Challenges & Goals

In space, semiconductor devices are exposed to intense radiation, which can cause degradation and failure. Using radiation-tolerant AlN semiconductors, we aim to develop reliable power and communication systems for long-term operation in harsh space environments and contribute to space exploration.



Key Technologies

Core Technologies

- Crystal growth technology for producing world-leading-quality AlN semiconductor crystals
- Device fabrication technology that harnesses the outstanding properties of AlN in electronic devices

Key Differentiators

- NTT pioneered AlN as a next-generation semiconductor
- NTT was the first in the world to demonstrate the excellent radiation tolerance of AlN

Use Cases

Aerospace & Defense

The excellent radiation tolerance of AlN semiconductors can contribute to highly reliable power and communication systems for high-radiation environments, such as space and nuclear and fusion facilities.

Exhibitors

NTT Basic Research Laboratories

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