Canon

Contribution for 5G world

5Gの世界にお役立ち

CANON ANELVA Equipment

キヤノンアネルバの装置

SAW デバイス向け成膜装置
Sputtering Equipment for SAW Device

原子拡散接合装置
Atomic Diffusion Bonding Equipment

半導体向け成膜装置
Sputtering Equipment for Semiconductor Device

半導体向けエッチング装置
Dry Etching for Semiconductor Device

高密度実装向け成膜装置
Sputtering Equipment for Advanced Packaging High Productivity

LED 生産向け成膜装置
Sputtering Equipment for LED

Filter

DRAM

MRAM

CPU

PLP・WLP

LED

スモールセル
Small cell

High Frequency Device

Laser Diode

Amplifier

Oscillator

基地局
Macro base station

5G インフラ
5G Infrastructure

5G 端末
5G Edge

サーバ
Server

データセンタ
Data Center

サーバ
Server

HDD

Magnetic sensor

Power Device

CMOS Image Sensor

磁気デバイス用成膜装置
Sputtering Equipment for Magnetic Device

SiC 活性化アニール装置
SiC Electron Bombardment Anneal System

CMOS センサー用成膜装置
Sputtering Equipment for CMOS Image Sensor

各種デバイス検査
Inspection of various devices

検査用 X 線源
X-ray source for the inspection

リークディテクタ
Leak Detectors

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Bonding of different materials without pressurizing nor heating

異種ウェハを無加熱・無加圧で接合

Atomic Diffusion Bonding Equipment BC7000

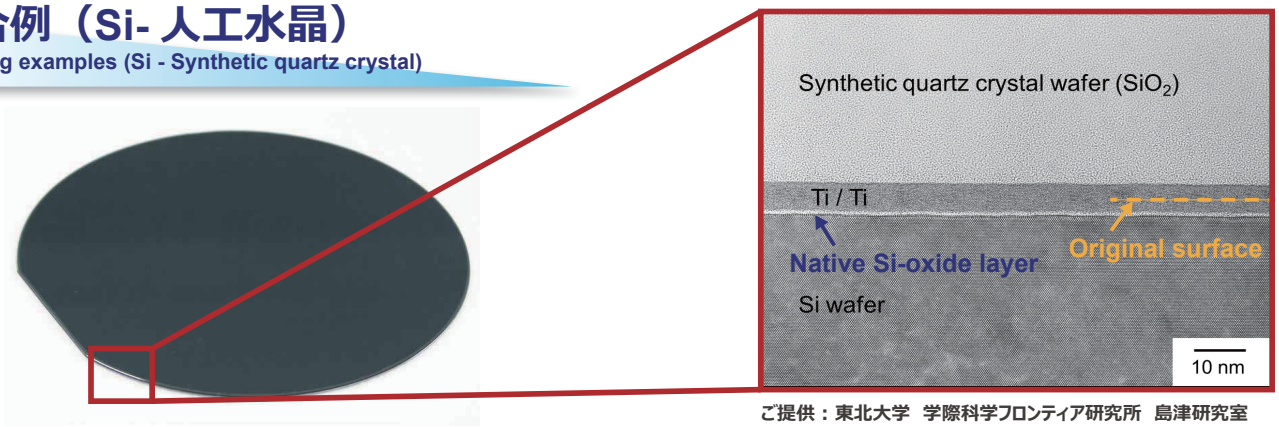
原子拡散接合装置 BC7000

新しいデバイスの特性・構造・工程を創出

Creating the innovative device with new performance, structure and process

接合例（Si- 人工水晶）

Bonding examples (Si - Synthetic quartz crystal)



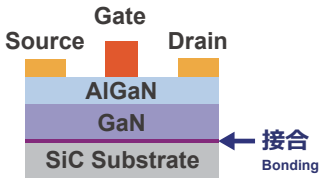
ご提供：東北大学　学際科学フロンティア研究所　島津研究室

Courtesy of Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Shimatsu Labo.

熱伝導率改善 ～5G 通信の高出力対応～

Improvement of thermal conductivity at bonding interface ～ High power device for 5G communication ～

GaN HEMT



DHBT（Double Heterojunction Bipolar Transistors）

異種材料の貼付けで放熱改善

Enhancement of thermal conductivity by the bonding of different materials

層転写して放熱改善

Enhancement of thermal conductivity by layer transcription

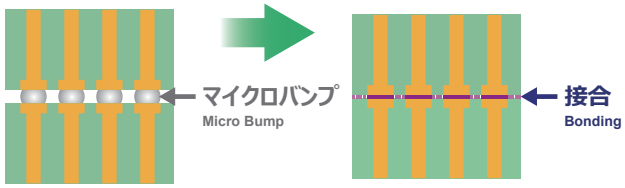
電気伝導率改善 ～3 次元実装～

Improvement of electric conductivity at bonding interface ～ 3D Packaging ～

光透過率改善 ～出力ロスの改善～

Improvement of light transmittance rate at bonding interface ～ Ultra low loss output ～

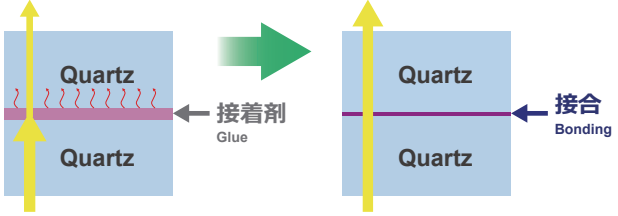
CMOS-Image sensor, Memory



バンプレスで電気伝導改善

Improvement of electric conductivity without bump

Optical Device



熱劣化なし

No thermal damage

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Supreme sputtering technology

極めた成膜技術

Various core technologies of CANON ANELVA

キヤノンアネルバの各種基盤技術

独自技術で価値を創出

Creating of value with our core technology

平坦化技術 ～CMPレスで平坦化を実現～

Sputtering technology for smooth surface film

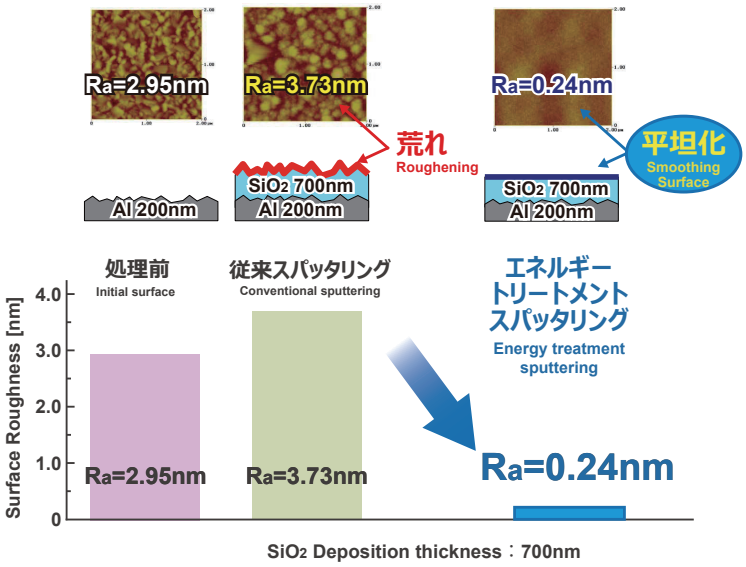
～ Realization of smooth surface film without CMP ～

低抵抗化技術 ～低消費電力の実現～

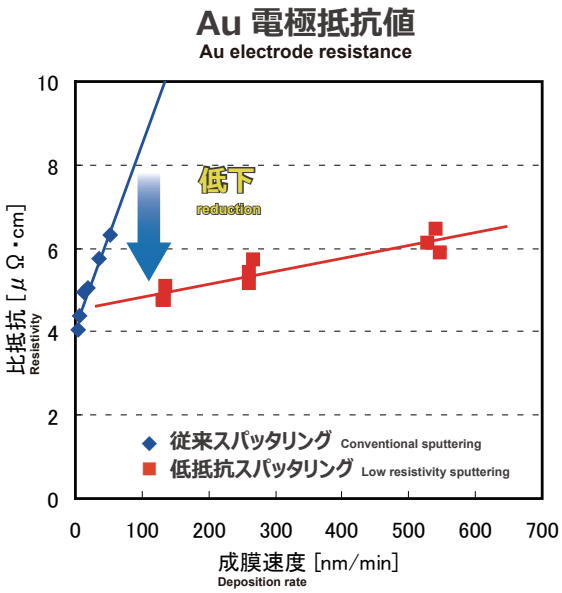
Low resistivity sputtering technology

～ Realization of the low power consumption ～

Optical Device



High Brightness LED



極薄膜・多層積層膜技術 ～数原子層レベルの成膜を実現～

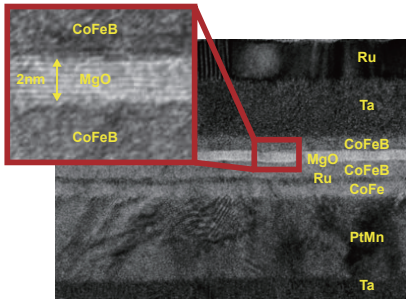
Sputtering technology for ultra thin film and multilayer

～ Realization of atomic level controlled sputtering ～

応用例

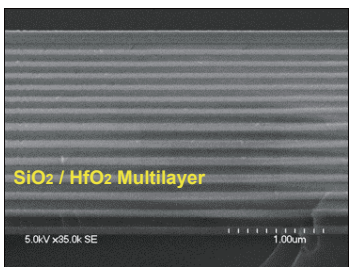
Application examples

MTJ*1 Structure



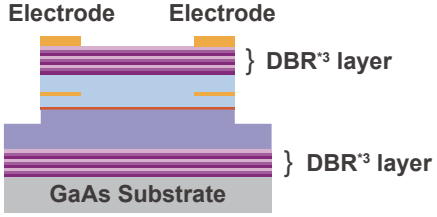
MRAM

Optical Multilayer



EUV*2 Mask

DBR*3 layer for VCSEL*4



平坦化・積層膜・膜厚制御技術でスパッタリングのみの多層膜を実現

Realization of sputtering multilayer by smoothing, multilayer and thickness control technologies

*1: Magnetic Tunneling Junction

*2: Extreme Ultra Violet

*3: Distributed Bragg Reflector

*4: Vertical Cavity Surface Emitting Laser

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