

### ***WiPDA Asia Explores Emerging SiC And GaN Technology***

The IEEE Workshop on Wide Bandgap Power Devices and Applications in Asia ([WiPDA Asia 2020](#)) which will be held this year September 23-25 in Kyoto, Japan, focuses on emerging technology in power electronics related to wide-bandgap power semiconductor devices. In particular, it focuses on SiC and GaN power devices which have experienced significant progress recently. Among the highlights of this event, Professor Matsunami, who is a leading authority on SiC semiconductor materials and devices, will present a detailed history of SiC semiconductor material and power device development.

The workshop features keynote talks representing the main categories of device manufacturers. Although there are many SiC and GaN power device manufacturers in the world, they are classified as one of two types. One is the pure-play company focusing on device manufacturing. The other is manufacturing devices and applying them in their application's products. The difference in the framework of these manufacturers results in differences in the design concepts of the power devices.

The keynote speakers at WiPDA Asia 2020 are nominated from both types of device manufacturer. The latest application apparatus and its details are also introduced in the keynote.

Within the regular sessions of the workshop, the main topics are also categorized into device and application categories as follows:

- Hetero-epitaxial and bulk materials growth
- Gate dielectrics and surface passivation
- Device structures and fabrication techniques
- Device characterization and modeling
- Very high efficiency and compact converters
- SOAs including short-circuit, spike, and transient tolerance
- Harsh environment (e.g. high temperature) operation and reliability
- Packaging, power modules, and ICs
- Hard-switched and soft-switched applications
- Common-mode and EMI management
- Gate drive and other auxiliary circuits
- High-performance passive components
- Applications in renewable energy and storage, transportation, industrial drives, and grid power.

These topics are expected to inspire thought-provoking discussions from different viewpoints in the sessions.