



## "New applications of wide gap semiconductors"

• Date and time: Friday, September 1, 2023 13:00-17:40

• Location: Ginza Unique 7-chome N201 (Ginza 7-chome 13-15, Chuo-ku, Tokyo)

<https://ginza-uni-ku.jp/access/access-7/>

With advances in materials and process technology, wide gap semiconductors are being used not only for conventional power device applications, but also for Research and development is actively being carried out with a view to a variety of new applications. This study group focuses on not only power devices but also Characteristics of wide gap semiconductors such as CMOS gate drive circuits, image sensors, quantum sensors, photocatalysts, heat dissipation materials, etc. We would like to ask you to report on recent developments in new applications that take advantage of Discuss various applications.

.....program.....

### Opening

12:30 13:00-13:10 Opening remarks

13:10-13:45 Highly durable and highly efficient hydrogen generation using 3C-SiC photocatalyst and future prospects

Masashi Kato (Nagoya Institute of Technology)

13:45-14:20 Research and development of SiC radiation-resistant CMOS image sensors and integrated circuits

Shinichiro Kuroki (Hiroshima University)

14:20-14:55 Current status and prospects of quantum sensing technology using spin defects in SiC

Takeshi Oshima (National Institute for Quantum Science and Technology)

14:55-15:30 High-precision current measurement for electric vehicles using diamond quantum sensors

Yuji Hatano (Tokyo Institute of Technology)

15:30-15:50

break

15:50-16:25 SiC CMOS gate driver integration into SiC power devices

Mitsuo Okamoto (National Institute of Advanced

Industrial Science and Technology) 16:25-17:00 Normally-off high channel mobility C-Si-O terminated diamond p-MOSFET for complementary inverter applications

Hiroshi Kawarada (Waseda University)

17:00-17:35 Reducing thermal resistance of semiconductor devices by direct diamond bonding

Naoki Shigekawa (Osaka Public University)

17:35-17:40 Closing remarks

• Participation registration: Please register your participation and pay the participation fee online using the web participation registration system ([click here](#)).  
vinegar. Due to the limited number of seats, registration may end early.

• Participation fee: (consumption tax included)

Advanced Power Semiconductor Subcommittee members\* 4,000 yen, Subcommittee student members 1,000 yen, General 6,000 yen, General students 1,000 yen

\*If you are a supporting member of the Advanced Power Semiconductor Subcommittee, you will be treated as a member of the Advanced Power Semiconductor Subcommittee.

• Request for cooperation during the on-site event: If you have a fever, please refrain from participating on the day of the event. Mass at the venue

Wearing a jacket is optional.

• Contact information:

Yuji Yano (University of Tsukuba) e-mail: [yano.hiroshi.fn@u.tsukuba.ac.jp](mailto:yano.hiroshi.fn@u.tsukuba.ac.jp)

Kazusato Kojima (National Institute of Advanced Industrial Science and Technology) e-mail: [kazu-kojima@aist.go.jp](mailto:kazu-kojima@aist.go.jp)

Yasuto Hijikata (Saitama University)

e-mail: [yasuto@mail.saitama-u.ac.jp](mailto:yasuto@mail.saitama-u.ac.jp)