



"Power electronics application of WBG semiconductor"

Date and time: Wednesday, February 22, 2023 13:00-17:30

Location: Osaka University Suita Campus Medicine Ginkgo Hall Hankyu Sanwa Hall

2-1 Yamadaoka, Suita City, Osaka Prefecture 5 minutes walk from Osaka Monorail Saito Line "Osaka University Hospital" station

(Venue access map: see attached) <https://www.eng.osaka-u.ac.jp/ja/access/#c01>

Power semiconductors have long supported power electronics technology, and Si-MOSFETs and IGBTs have been the main players. recent years,

GaN-HEMT is applied to smartphone AC adapters, etc., and SiC-MOSFET is applied to electric vehicles, railway inverters, etc.

It has come to be. In the future, it will be widely applied in these fields, and new applications are also being considered.

At this study group, we will receive lectures from fields where wide bandgap (WBG) semiconductors are applied, and will discuss the future of wide bandgap (WBG) semiconductors.

Use it for research and development.

.....program.....

12:30 Opening

13:00-13:10 Opening remarks, explanation of today's progress

13:10-13:45 EV charging/discharging standards and global trends -

national policies, markets, technology trends, global competition

Tomoya Imazu (CHAdEMO Council, Tokyo Electric Power

Company) 13:45-14:20 Current status and issues of power modules used in in-vehicle inverters

Arihiro Kamiya (Denso Corporation)

14:20-14:55 Power electronics applications of GaN power transistors

Ken Shono (Transform Japan Co., Ltd.)

14:55-15:30 Current status of SiC power device application in railway vehicles and efforts to further downsize the main circuit

Noriko Fukuda (Railway Technology Research Institute)

15:30-15:40 Break

15:40-16:15 Development of arcless DC hybrid switch

Takashi Kawaguchi (Sigma Energy Co.,

Ltd.) 16:15-16:50 Evolution of power devices and trends in SiC applied equipment

Kenji Oi (Mitsubishi Electric Corporation)

16:50-17:25 About the automotive power electronics market

Toru Hosaka (YOLE Co., Ltd.)

17:25-17:30 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.

• Infectious Disease Countermeasures: Please cooperate with temperature checks in advance and refrain from participating on the day of the event if you have a fever. Also, the venue

Please cooperate with the temperature check again at the entrance (if your body temperature is over 37.5 degrees, you will not be able to participate). Disinfection at the venue

Please also wear a mask at all times.

• Contact information:

Akihiko Furukawa (Mitsubishi Electric) e-mail: Furukawa.Akihiko@df.mitsubishielectric.co.jp

Isao Kamata (Central Research Institute of Electric Power Industry) e-mail: kamata@criepi.denken.or.jp

Ryo Tanaka (Fuji Electric) e-mail: tanaka-ryou@fujielectric.com

