



Wide bandgap semiconductors: the forefront of bulk crystal growth

☿ Date and time: Friday, November 18, 2022 10:30-17:40 ☿ Location: Nagoya

University Higashiyama Campus ES General Building 1F ES Hall

Power electronics has a major role to play in achieving carbon neutrality. In particular, expectations for wide bandgap semiconductors are increasing, and high-quality, low-cost crystal growth technology is essential for their widespread use. In this study group, we will share the latest trends in crystal growth technology across materials such as SiC, GaN, Ga₂O₃, and diamond, and discuss future challenges and prospects. _____ Program _____

10:30~10:40 Opening remarks

10:40~11:20 Current status of **γ-Ga₂O₃** bulk wafer development

Shinya Watanabe (Novel Crystal Technology Co., Ltd.)

11:20~12:00 Diamond wafer manufacturing technology development

Hideaki Yamada (National Institute of Advanced Industrial Science and Technology)

12:00~13:00 break

13:00~13:40 GaN crystal growth using acidic ammonothermal method

Yutaka Mikawa (Mitsubishi Chemical Corporation)

13:40~14:20 Large-diameter high-quality **GaN** crystal growth using Na flux method

Yusuke Mori (Osaka University)

14:20~15:00 Progress in **GaN** growth technology using HVPE method

Isho Fujikura (Shiox Co., Ltd. (currently Sumitomo Chemical Co., Ltd.))

15:00~15:20 break

15:20~16:00 Defect control and conductivity control in **SiC** crystal growth using sublimation method

Kazuma Eto (National Institute of Advanced Industrial Science and Technology)

16:00~16:40 **High** -speed and high-quality **SiC** crystal growth using high-temperature gas growth method

Takahiro Kanda (Mirise Technologies Co., Ltd.)

16:40~17:20 Development of **SiC** solution growth for 8 inch

Toru Ujihara (Nagoya University)

17:20~17:40 Summary and closing remarks

☿ Participation reception: WEB participation reception system (click here*) Please register your participation and pay the participation fee online. Due to the limited

number of seats, registration may end early. *If this guide is in print, <http://annex.jsap.or.jp/adps/pdf/kenkyuukai23.pdf> Please access more.

☿ Participation fee (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 *Those who belong to the Advanced Power Semiconductors Subcommittee supporting members are treated as members of the Advanced Power Semiconductors 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. In addition, there will be a re-opening at the venue entrance.

(If your body temperature is over 37.5 degrees, you will not be able to participate). At the venue, please disinfect and wear a mask at all times.

Thank you.

Contact: (For inquiries regarding various procedures, please contact the Japan Society of Applied Physics Secretariat)

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