



"WBG semiconductor simulation technology"

Date and time: Friday, May 19, 2023 13:00-17:35

Location: Kikai Shinko Kaikan 6-67 Conference Room
3-5-8 Shiba Koen, Minato-ku, Tokyo

Simulations in Si device and process development have high calculation accuracy, and can be used for prototyping in research and development. The importance of alternative simulations is increasing. On the other hand, in the simulation of WBG material system, Physical property parameters and physical models are not fully reflected and are not fully utilized as EDA. There is a current situation. Therefore, in this discussion, we will discuss to what extent WBG semiconductor simulation technology is currently available. We will discuss model parameters, computational issues, and future prospects.

.....program.....

12:30

venue

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

progress [Part 1] Presentation and

discussion of SiC topics 13:10-13:40 Physical model of SiC physical

properties in TCAD Tetsuo Hatakeyama

(Toyama Prefectural University) 13:40-14:00 Development of ultra-high voltage

SiC IGBT using TCAD Naoki Watanabe (Hitachi, Ltd.)

14:00-14:40 Individual discussion on SiC Break

[Part 2]

14:40-14:50

Presentation and discussion of GaN topics

14:50-15:10 Challenges of TCAD simulation in GaN-HEMT Akira Nakajima (Industrial

National Institute of Technology)

15:10-15:30 Progress and prospects of high-field physical property evaluation of GaN

Takuya Maeda (University of Tokyo)

15:30-15:40 Reverse bias leakage current simulation in dislocation-free GaN pn junction

GaN

Tomoyuki Shoji (Toyota Central Research Institute)

analysis 15:40-16:20 Individual discussion on

16:20-16:30

GaN Break

[Part 3] Participants provide topics and general discussion

16:30-17:30 Participants also provide information Discussion based

on the above questions Q&A/

discussion throughout 17:30-17:35 Closing remarks

.....
About Participation: This is a discussion group where everyone can participate to discuss WBG semiconductor simulation technology. participant The chairperson may ask you to speak. When doing so, be sure to speak up (if you are having trouble with the simulation).

Please leave any comments you may have, such as what you are doing or any questions you may have. We welcome comments using slides.

vinegar.

•Participation registration: Please register your participation using the web participation registration system (click here). Deadline: April 24th (Monday). Main idea
If the text inside is printed, <https://formok.com/f/zs5r56x9> Please access more.

•Participation fee: (tax included) After applying for participation, we will inform you about online payment.

Advanced Power Semiconductor Subcommittee members* 2,000 yen, general public 4,000 yen, students (subcommittee members/general) 1,000 yen

*We will notify you where to download the proceedings (PDF) on Friday, May 12th. No refunds will be accepted after this time.

•Please cooperate with the on-site event: If you have a fever, please refrain from participating on the day of the event. Masks at the venue

Wearing is optional.

•Contact information:

Chiharu Ota (Toshiba)

TEL: 044-549-2142

e-mail: chiharu.ota@toshiba.co.jp

Toru Oka (Toyoda Gosei)

TEL: 052-747-6930

e-mail: toru.oka@toyoda-gosei.co.jp

Manabu Arai (Nagoya University)

TEL: 050-3625-5455

e-mail: marai@imass.nagoya-u.ac.jp