

# Publications and Invited Talks

Atsushi Oshiyama

## (A) Original Papers

1. K. Seino and A. Oshiyama, “Energetics of the surface step and its morphology on the 3C-SiC(111) surface clarified by the density-functional theory” *Appl. Phys. Exp.* **13**, 015506 (2020).
2. K. Seino and A. Oshiyama, “Microscopic Identification of Surface Steps on SiC by Density-Functional Calculations” *Proc. Int. Conf. SiC Related Materials (IC-SCRM2019)* (September 2019, Kyoto) *Mater. Sci. Forum* **1004**, pp145 (2020).
3. K. M. Bui, M. Boero, K. Shiraishi and A. Oshiyama, “A two-dimensional liquid-like phase on Ga-rich GaN (0001) surfaces evidenced by first principles molecular dynamics” *Jpn. J. Appl. Phys.* **59**, SGGK04 (2020).
4. F. Shintaku, D. Yosho, Y. Kangawa, J.-I. Iwata, A. Oshiyama, K. Shiraishi, A. Tanaka and H. Amano, “Computational study of oxygen stability in vicinal m(10-10)-GaN growth by MOVPE” *Appl. Phys. Exp.* **13**, 055507 (2020)
5. K. Seino and A. Oshiyama, “Density-Functional Calculations for Structures and Energetics of Atomic Steps and their Implication for Surface Morphology on Si-face SiC Polar Surfaces” *Phys. Rev B* **101**, 195307 (2020).
6. D. Yosho, F. Shintaku, Y. Inatomi, Y. Kangawa, J.-I. Iwata, A. Oshiyama, K. Shiraishi, A. Tanaka and H. Amano, “Oxygen incorporation kinetics in vicinal m(10-10)-GaN growth by MOVPE” *Phys. Sta. Solidi - Rapid Res. Lett.* 2000142 (2020).
7. K. Chokawa, T. Narita, D. Kikuta, T. Kachi, K. Shiozaki, A. Oshiyama and K. Shiraishi, “Absence of oxygen-vacancy-related deep levels in amorphous  $(\text{Al}_2\text{O}_3)_{1-x}(\text{SiO}_2)_x$ : First-principles exploration of gate oxides in GaN-based devices” *Phys. Rev. Applied* **14**, 014034 (2020).

## (B) Invited Talks

1. A. Oshiyama, “Computics Approach toward Clarification of Atomic Reactions during Epitaxial Growth of GaN” *Int. Conf. Simulation of Semiconductor Processes and Devices (SISPAD)* (September 23 - October 6, 2020, All-Virtual Conf)