

NEWS RELEASE

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Tokyo University of Agriculture and Technology
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Achievement of High-Speed Growth of High-Purity β -Gallium Oxide Films by Metalorganic Vapor Phase Epitaxy

Professor Yoshinao Kumagai and Assistant Professor Ken Goto of Division of Applied Chemistry, Institute of Engineering, Tokyo University of Agriculture and Technology (President: Kazuhiro Chiba) and Assistant Professor Shogo Sasaki of the University's FLOuRISH Institute, in collaboration with Mr. Junya Yoshinaga, Mr. Guanxi Piao, and Dr. Kazutada Ikenaga of CSE Department, Innovation Unit, Taiyo Nippon Sanso Corporation (President: Kenji Nagata), and Dr. Yuzaburo Ban, Fellow of Taiyo Nippon Sanso CSE Ltd. (President: Takashi Aida), have achieved the high-speed growth of high-purity β -gallium oxide (β -Ga₂O₃) thick films using the metalorganic vapor phase epitaxy (MOVPE) method, which has been considered difficult. β -Ga₂O₃ is attracting attention as an important semiconductor for next-generation power devices, which are essential for increasing the efficiency of power control and conversion systems. This achievement is expected to lead to the practical application of mass production technology for β -Ga₂O₃ power devices for the realization of an energy-saving society in the future.

The research results have been published online in the English-language journal *Applied Physics Express (APEX)* on September 28.

Title of paper: High-speed growth of thick high-purity β -Ga₂O₃ layers by low-pressure hot-wall metalorganic vapor phase epitaxy

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