NEXUS International Internship Completion Report

NEXUS 国際インターンシップ終了レポート

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Host Laboratory / Supervisor 受入研究室・指導教員	Professor Hitoshi Tabata	**Internship Period** 期間	2026/03/01 – 2026/05/30
Email メール	nvtinh02tb@gmail.com	**Report File Name** ファイル名	NEXUS_Report_Nguyen Van Tinh.pdf

1. Overview of Internship Activities / 活動内容の概要

Briefly describe your main activities: research theme, experiments, simulations, fabrication, measurements, data analysis, seminars, discussions, or laboratory work. Suggested length: 120-160 words.

During my internship in Professor Hitoshi Tabata's laboratory, I worked on a research project entitled **"Conducting Garnet Thin Films Using PLD via Ca–Zn Co-doped YIG Towards Magnon FET Applications."** The research focused on developing electrically conductive garnet materials for future magnonic devices. Bulk ceramic targets were synthesized using the conventional solid-state reaction method, and thin films were deposited by pulsed laser deposition (PLD). I participated in sample preparation, thin-film fabrication, and characterization using X-ray diffraction (XRD), X-ray photoelectron spectroscopy (XPS), vibrating sample magnetometry (VSM), and current–voltage (I–V) measurements. In addition to experimental work, I analyzed measurement data and discussed research progress with laboratory members. The laboratory held weekly seminars every Thursday, where students presented their research and exchanged ideas through discussions and questions. Weekly one-on-one meetings with Professor Tabata provided valuable guidance and feedback. The laboratory maintained a highly active and collaborative research environment, where members supported one another whenever needed.

2. Photo from the Internship / インターンシップ中の写真

Insert one representative photo and provide a short caption: date, place, activity, or people shown in the photo.

Photo caption / 写真キャプション

21 May 2026, The University of Tokyo – Tabata Laboratory. Presentation of my internship research during the weekly seminar, followed by discussions, questions, and feedback from laboratory members. A farewell party was organized afterward to celebrate the completion of my internship. Additional photos are available through the attached Google Drive link (valid until September 2026). Click here

3. Reflection on the Program / プログラムへの感想

Write what you learned, what was most valuable, challenges you faced, influence on future study/career plans, and suggestions for improving the program. Suggested length: 120-160 words.

This internship was a highly valuable and memorable experience for both my academic and personal development. Through my research project, I gained hands-on experience in thin-film fabrication, material characterization, data analysis, and scientific discussions. Working in an international research environment allowed me to learn new approaches to research and improve my communication skills. One of the most rewarding aspects of the program was meeting new people, making friends from different backgrounds, and experiencing Japanese research culture. The internship also helped me better understand my strengths and identify areas where I still need improvement as a future researcher.

The experience strengthened my motivation to pursue graduate studies and a research-oriented career in materials science. As a suggestion for future programs, it would be helpful if internship students could be provided with university accounts to access shared group emails and scheduling systems. In addition, temporary access cards for laboratory buildings would make daily entry and exit more convenient when the building is locked.