



To whom it may concern:

I am writing to formally evaluate Mr. Zongda YANG's research visit to the University of Tennessee (UT). Mr. YANG, affiliated with the Department of Nuclear Engineering at the University of Tokyo, joined us as a visiting graduate student for one month from March to April 2025.

During his stay, Mr. YANG worked closely with my research group on advanced characterization of radiation effects in nuclear structural materials. Specifically, he participated in a research project investigating the irradiation-induced phase instability of precipitates in nuclear materials, with a particular focus on the amorphization mechanism of Laves phase under helium ion irradiation.

As a Governor's Chair Professor at UT and Oak Ridge National Laboratory, I lead research initiatives in radiation effects in materials and development of advanced nuclear materials. Mr. YANG's research objectives, under the guidance of his advisor at the University of Tokyo, aligned perfectly with our ongoing investigations into radiation damage mechanisms in structural materials.

Mr. YANG demonstrated exceptional technical capabilities in utilizing our state-of-the-art aberration-corrected scanning transmission electron microscope (STEM). He successfully conducted atomic-resolution imaging of helium-irradiated samples and made significant discoveries regarding the role of helium bubbles in material phase stability. His finding that high-pressure helium bubbles create unique stacking faults that enhance radiation resistance is particularly noteworthy and opens new avenues for understanding radiation damage mechanisms.

I was particularly impressed by Mr. YANG's analytical skills and scientific intuition. During our technical discussions, he showed a deep understanding of the physical mechanisms underlying radiation effects and demonstrated strong ability to interpret complex experimental results. His active participation in our weekly group meetings and thoughtful contributions to scientific discussions enriched our research environment.

Furthermore, Mr. YANG exhibited excellent communication skills and team spirit, collaborating effectively with our technical staff and other group members. He quickly adapted to our research environment and made efficient use of our shared facilities, demonstrating both independence and collaborative spirit in his research approach.

In conclusion, Mr. YANG's visit to UT was highly productive and successful, resulting in valuable

scientific findings and establishing strong foundations for future collaboration between UT and the University of Tokyo. I was very pleased to have him in my group and look forward to continued scientific exchange between our institutions.

Please feel free to contact me if you require any additional information.

Sincerely,  
Steven J. Zinkle

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Steven J. Zinkle  
UT/ORNL Governor's Chair,  
Dept. of Nuclear Eng. and Dept. of Mater. Sci. & Eng.  
University of Tennessee  
324 Zeanah Engineering Complex  
863 Neyland Drive  
Knoxville, Tennessee 37996-2300  
Tel. 865-974-4589