

The International Research Training Group (IGK 2495) “Energy Conversion Systems: From Materials to Devices” at the Friedrich-Alexander-Universität Erlangen-Nürnberg offers

11 doctoral researcher positions

for projects related to photo-electro-mechanical energy harvesting systems, including material synthesis, characterization, device integration, and material simulation.

The IGK2495 was established in 2019 with our partner institute, the Nagoya Institute of Technology, Japan, in order to better understand lead-free perovskite materials for photo-electro-mechanical energy conversion systems. Such multimodal energy sources will become increasingly vital over the next decades, not only as sources of renewable energy but also for high-tech applications, such as powering unattended wireless sensors. Of particular importance is the improved understanding of multi-length scale phenomena responsible for the energy conversion, development and implementation of state-of-the-art lead-free perovskite materials, novel 2D and 3D processing techniques, and integration into devices. Various synthesis, manufacturing, and experimental techniques will be utilized and coupled to cutting edge simulations, facilitating interdisciplinary collaboration.

We are seeking highly motivated doctoral researchers with a M.Sc., or equivalent, in materials science, chemistry, mechanical engineering, physics, mathematics, or electrical engineering. Ideal candidates have demonstrated excellence through their academic record and timely completion of B.Sc. and M.Sc. studies, in addition to having established interest and experience in the scientific area related to the IGK2495. Proficient oral and written communication skills in English are required. Doctoral researchers will work closely with various partners in both Germany and Japan, necessitating teamwork and interpersonal skills.

We offer a vibrant research environment, where you will work collaboratively with an international team of German and Japanese scientists and engineers on various aspects of photo-electro-mechanical materials and devices. The international training group will offer a variety of educational and training activities, such as tutorials, hands-on workshops, and yearly summer schools, to support doctoral researchers during their projects as well as develop intercultural training. As part of each project, an extended research stay (6 to 12 months) at our partner institute Nagoya Institute of Technology, Japan, is planned. We strive for an open and inclusive research environment.

The salary is according to German standard (E13 TL-V, 100%). All positions are fully funded for 3 years starting on January 1st, 2026 until December 31st, 2028. The Friedrich-Alexander-Universität Erlangen-Nürnberg is interested in increasing the share of women in research and teaching positions and, therefore, explicitly encourages female candidates to apply.

Applications should include a CV, a letter of motivation, academic transcripts and certificates, and, if necessary, a letter detailing any other pertinent information, such as prolonged delays in study or significant extracurricular activities. In addition, a letter of recommendation is encouraged. Please mention a maximum of 3 projects you are interested in applying for. Please note that project B is not available. More information about individual projects can be found at www.igk2495.fau.de/.



Applications should be sent electronically by **15.07.2025** to igk2495-apply@fau.de.