



Enhancing Research Infrastructure at The Ohio State University's Nuclear Engineering Program

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Program: General Scientific Infrastructure

ABSTRACT: The overall objective of the proposal is to enhance educational and research capabilities of the Nuclear Engineering Program at The Ohio State University. Proposed equipment will improve infrastructure to perform research in advanced sensor development and material property characterization. Material property characterization will be enhanced through accrual of instruments to measure the influence of radiation damage and high temperature on optical and mechanical properties of materials. Advanced sensor development capabilities will be improved by equipment that allows characterization of electrical signals generated by sensors and optical fibers developed for in-pile instrumentation. Instruments include photoluminescence and UV-Vis spectrometers, GHz oscilloscope, spectrum analyzer, pulsed laser, fiber optic sensor characterization equipment, inert environment glovebox, equipment for ultrasonics testing, and mechanical translation stages. Acquired infrastructure will support activities that address advanced instrumentation needs of a number of DOE's programs including Advanced Reactor Concepts, Light Water Reactor Sustainability, Advanced Fuels and Transient Experiment Test and directly benefit the Nuclear Energy Enabling Technologies crosscutting efforts in Advanced Sensor and Instrumentation. Capabilities acquired through this program will further strengthen and expand the OSU's long-term leadership in the area of I&C.