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Abstract for an Invited Paper
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Preparing students for research excellence in optics and photonics

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Initial results will be described from an ongoing study that is investigating both academic and industrial career paths in optics and photonics. The dual goals of the project are developing useful information for physics departments and linking physics education research with the national dialog on the role of higher education in training the STEM workforce. The study is refining our understanding of the broad skills needed for success and how specific math, physics, and communication skills are utilized in academic and industrial labs. While physics education research has extensively studied conceptual learning and problem solving at the undergraduate level, this project connects that research with expertise and skills used in physics-intensive careers.