

2025 DAGSI Research Topic

1. **Research Title:** Light-matter interactions
2. **Individual Sponsor:**

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3. **Academic Area/Field and Education Level**

MS or PhD level degree program in Physics, Electrical Engineering, or Materials Science
4. **Objectives:** Optical characterization of materials supporting on-going research at AFRL.
5. **Description:** Materials for different sensing applications are characterized using a variety of techniques, including but not limited to, photoluminescence, spectroscopic ellipsometry, pump-probe techniques, second-harmonic generation, and Fourier transform infrared spectroscopy. The range of ongoing projects allows the scope of work to be tailored to the individual student's background and graduation requirements.
6. **Research Classification/Restrictions:** Unclassified/U.S. citizenship required
7. **Eligible Research Institutions:** AFIT, University of Cincinnati, University of Dayton, The Ohio State University, University of Toledo, Wright State University, and Case Western Reserve University.