NanoJapan aims to cultivate a generation of globally competent scientists and engineers through a program that combines a cutting-edge summer research experience in Japan with language and culture study. Research projects focus on terahertz and/or nanoscale science, particularly electronic, magnetic, and optical phenomena in nanomaterials, nanostructures, and nanodevices and we seek to encourage participants to pursue future graduate study in a related field.

**Eligibility Requirements**
- U.S. Citizen or Perm. Resident
- Freshman or Sophomore
- Engineering or Physics Major
- No Prior Japanese Language or Research Experience Required
- Women & Students Underrepresented in STEM are Strongly Encouraged to Apply

**Program Includes**
- Up to a $4,500 Stipend + Int’l Airfare
- 3-wk Language & Culture Orientation in Tokyo
- 8-wk Nanotechnology Research Internship In lieu of pgm fee, enroll in 1 credit of research (~$1,000)

**Program Schedule**
- Applications Open: Mid-November
- Applications Due: January 24
- References Due: February 1
- Participants Notified: Mid-March
- Orientation in Tokyo: Starts in Mid-May
- Research Internship: June - August
- Research Symposium: Early August

**NSF-PIRE: U.S.-Japan Cooperative Research and Education on Terahertz Dynamics in Nanostructures (OISE-0530220)**
This U.S.-Japanese Partnership explores terahertz (THz or $10^{12}$ Hz) dynamics in nanostructures. The electromagnetic spectrum from 0.1 to 10 THz offers many opportunities to study physical phenomena, with potential payoff in numerous technologies. However, this regime is poorly developed compared to those of electronics ($<100$ GHz) and photonics ($>10$ THz). By a judicious combination of THz technology and nanotechnology (“TeraNano”), we significantly advance our understanding of THz physics, while improving existing, and developing new, THz devices. Although Japan and the U.S. are global leaders in both THz research and nanotechnology, there remain obstacles to further collaboration between them, primarily linguistic and cultural barriers. By breaking down these barriers, this PIRE program achieves long-term scientific and societal impact, providing future generations of researchers with an understanding of both the culture, and state-of-the-art technology, in each country.

**Advances quantitative understanding of the THz dynamics of nanostructures**

**Grows, synthesizes, and fabricates novel nanostructures for THz study and applications**

**Experimental techniques in THz spectroscopy and imaging**

Supported by a NSF-PIRE: Partnerships for International Research & Education Grant (OISE-0530220)