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Terahertz detectors based on AlGaN/GaN HEMT semiconductor structures

Topic

The terahertz (THz) frequency range (100 GHz – 10 THz) is attractive for various applications, but requires sensitive THz detectors. Bow-tie type THz detectors fabricated out of AlGaN/GaN HEMT semiconductor structures are attractive due to the properties of gallium nitride – high breakdown field, chemical resistance, and high temperature operation, all of which are important in real world applications.

The topic requires experimental measurements (training will be provided):

- Electrical characterization of detectors
- Optical characterization of detectors in the THz frequency range

For student:

1. Opportunity to fulfill student practice/course project/experimental thesis
2. Opportunity to participate in Research council of Lithuania funded projects for student summer or semester research with grant/scholarship

For those interested – contact me via email justinas.jorudas@ftmc.lt