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| [Home](https://xitanghkust.github.io/index.htm)  [Projects](https://xitanghkust.github.io/projects.htm)  [Publications](https://xitanghkust.github.io/publications.htm)  [Teaching](https://xitanghkust.github.io/teaching.htm)  [Contact](https://xitanghkust.github.io/contact.htm) | Research Interests  **Wide-bandgap device technology: device physics, design, process technology, characterization, and reliability test**   |  |  | | --- | --- | |  |  | |  |   **III-nitride optoelectronic device technology**   1. UV-light source based on AlGaN/GaN heterostructure 2. High-speed UV detectors  |  |  |  | | --- | --- | --- | |  |  |  |   **Material Structure and Property Characterizations**   1. Photoluminescence characteristics of defects 2. A theoretical study based on first-principle calculations |