



## Lattice Mismatched Heterojunction Structures And Devices Made Therefrom

[View U.S. Patent No. 8,866,154 in PDF format.](#)

**WARF: P110281US01**

Inventors: Zhenqiang Ma, Jung-Hun Seo

---

### The Invention

Semiconductor heterojunction structures comprising lattice mismatched, single-crystalline semiconductor materials and methods of fabricating the heterojunction structures are provided. The heterojunction structures comprise at least one three-layer junction comprising two layers of single-crystalline semiconductor and a current tunneling layer sandwiched between and separating the two layers of single-crystalline semiconductor material. Also provided are devices incorporating the heterojunction structures, methods of making the devices and method of using the devices.

### Stage of Development

The development of this technology was supported by WARF Accelerator. WARF Accelerator selects WARF's most commercially promising technologies and provides expert assistance and funding to enable achievement of commercially significant milestones. WARF believes that these technologies are especially attractive opportunities for licensing.

### Additional Information

#### For More Information About the Inventors

- [Zhenqiang Ma](#)

#### Tech Fields

- [Semiconductors & Integrated Circuits : Design & fabrication](#)

For current licensing status, please contact Jeanine Burmania at [jeanine@warf.org](mailto:jeanine@warf.org) or 608-960-9846