

## General Cascade Field Effect Transistor Concept for Smaller, Faster, and More Efficient Transistors

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**Categories:**

- Electrical Engineering

**Keywords:**

- Cascade System
- Cascade Tunneling Field Effect Transistor
- CasTFET
- Electrical Engineering
- TFET
- Transistors
- Tunneling Field Effect Transistor

The Cascade Tunneling Field Effect Transistor (CasTFET) is a transistor concept that combines the tunneling field effect transistor (TFET) with the cascade system. One issue with the existing transistor concept is that it requires a TFET device, thus offering only limited application space. There is a need for a new technology that expands the CasTFET concept and is not restricted to TFET devices and the materials common to them.

Researchers at Purdue University have developed a general cascade field effect transistor concept. This concept will help logic device designers who want to fabricate smaller, faster, and more energy efficient transistors. By introducing an additional and new way of switching the current in a transistor, this technology will allow for the usage of similar or identical materials and device dimensions that are currently used.

**Advantages:**

- No restriction to TFET devices
- High market value

**Potential Applications:**

- Transistors
- Circuits

**People:**

- Kubis, Tillmann C (Project leader)
- Charles, James Anthony

**Intellectual Property:**

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**Contact OTC:**

Purdue Office of Technology Commercialization  
The Convergence Center  
101 Foundry Drive, Suite 2500  
West Lafayette, IN 47906

Phone: (765) 588-3475  
Fax: (765) 463-3486  
Email: [otcip@prf.org](mailto:otcip@prf.org)