

# New transistor concept - CasTFET

## Objective:

- Recently patented transistor concept “CasTFET” needs prototyping
- Design a device with faster and more energy-efficient switching mechanism

## Problem:

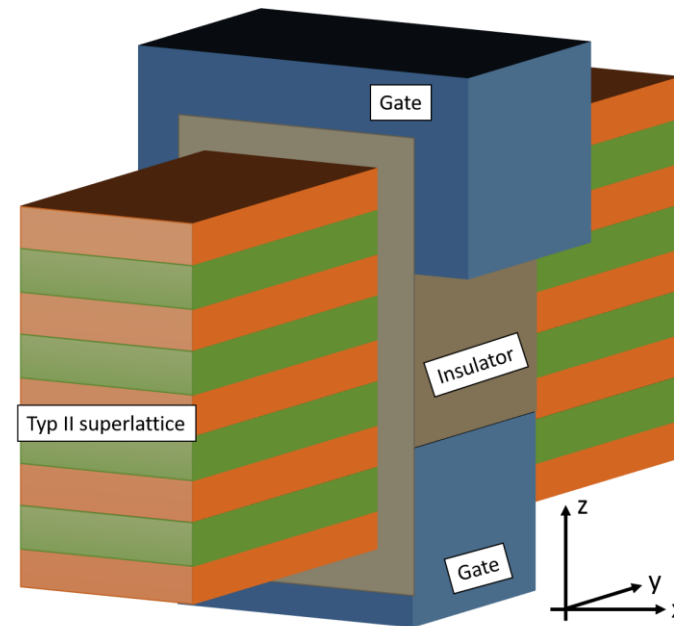
- Confirm novel switching effect in actual devices
- Design CasTFET for industrial metrics

## Results / Impact:

- Initial calculations confirm the concept works
- Collaboration with CEA/LETI (France) started
- Prototype design and simulations ongoing

## Approach:

- Atomistic quantum transport and electronic wave function calculations
- Collaborate with experimentalists and engineers in industry on CasTFET design



Cascade tunneling field effect transistor  
US Patent 10,763,367