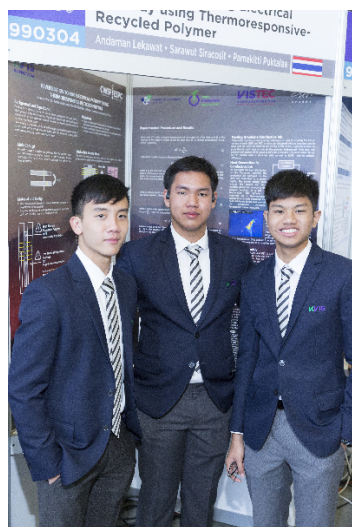


# CWSF 2018 - Ottawa, Ontario



## Andaman Lekawat, Sarawut Siracosit

### Reversible Switching Electrical Pathway using Thermoresponsive-Recycled Polymer

**Challenge:** International

**Category:** Senior

**Region:** Thailand

**City:** Suratthani, , Bangkok,

**School:**

**Abstract:** We propose fast and reversible Thermoresponsive device made of polymer named "Thermo-p Fuse." With the presence of overcurrent, the device can cut down the circuit to protect electronic devices or even switch the direction of electric current for other applications. The innovation enhances electronics' durability and can be adapted into various types of equipment such as micro-thermostats in electronic devices or main cutoff in factories.

#### Biographies

**Andaman** - The smell of melting plastic and lubricating oil reminds us of the first time we were brought into a plastic factory. The sound of the machines whirling is still vivid in our minds. This was during a field trip to visit PTT Global Chemical which is one of the largest petrochemical in Thailand. Because our school, Kamnoetvidya Science Academy (KVIS), is established and funded by PTT group, we gain this privilege. We started asking questions, one is how factories like PTT handle current overflows. Big machines consist of circuit breakers that prevent current from overflowing. However, unit devices, such as heat generators, motors, or sensors, u...

**Sarawut** - The smell of melting plastic and lubricating oil reminds us of the first time we were brought into a plastic factory. The sound of the machines whirling is still vivid in our minds. This was during a field trip to visit PTT Global Chemical which is one of the largest petrochemical in Thailand. Because our school, Kamnoetvidya Science Academy (KVIS), is established and funded by PTT group, we gain this privilege. We started asking questions, one is how factories like PTT handle current overflows. Big machines consist of circuit breakers that prevent current from overflowing. However, unit devices, such as heat generators, motors, or sensors, u...

#### Awards

#### Value

|                               |            |
|-------------------------------|------------|
| Gold Medal - International    |            |
| Sponsor: Youth Science Canada |            |
| <b>Total</b>                  | <b>\$0</b> |