**Chemical Reaction**

Anode: \( \text{Mg} + \text{SO}_4^{2-} \rightarrow \text{MgSO}_4 + 2e \)

Cathode: \( \text{PbO}_2 + 2e + 4\text{H}^+ + \text{SO}_4^{2-} \rightarrow \text{PbSO}_4 + 2\text{H}_2\text{O} \)

Overall Reaction: \( \text{PbO}_2 + 2\text{H}_2\text{SO}_4 + \text{Mg} > \text{PbSO}_4 + \text{MgSO}_4 + 2\text{H}_2\text{O} \)

**Stopping Mechanism**

Iodine Clocks:
An excess of iodine reacted to starch will produced a black dark mixture, in which when there is no light passes through the sensor, the electron flow in the LDR circuit will be cut off. Thus, the car will stop moving.

**Environmental & Safety Feature**

- The fuel used is environmentally friendly as only \( \text{H}_2 \) gas is released from the reaction
- Reaction were done in PP container which is safe for the reaction
- Low molarity of acid is used as electrolyte, resulting no unpleasant smell or smoke produced
- Made up from recycle material

**Material Cost**

- Motor: RM45
- Wiring Component: RM5
- Chemicals: RM15
- LDR Circuit: RM25
- Body Chasis: RM15
- Total: RM105

**Design**

- Compact and high durability
- Fast and Powerful

**GROUP MEMBERS**

1. YUZZAIEF BIN YUNUS
2. MUHD SHAFIQ BIN NAZAR
3. AFIQAH BT SAMSUL KAMAL
4. NINA SYAZWANY BT MOHAMED YASSIN

**Bumper:**

- The car have two removable bumper with different design respectively for each course
- Made up from high density material to increase the momentum transfer for the impact with contact