



# Rusting: anodization

## 1 Purpose & advantages

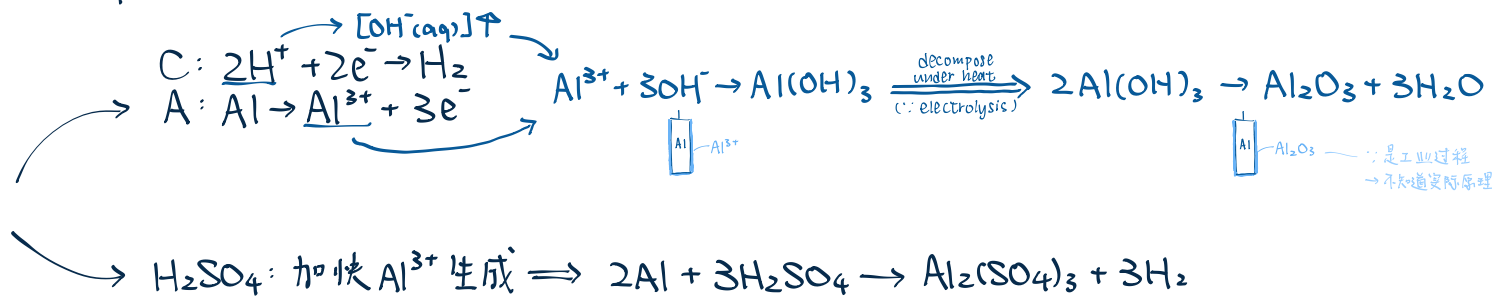
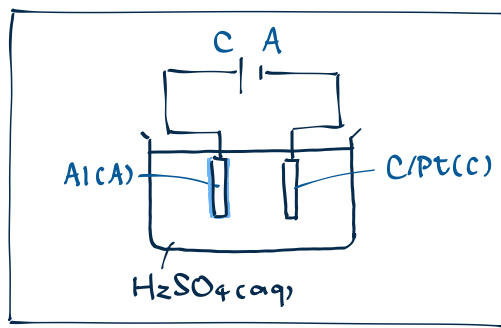
- Anodization = thicken protective  $\text{Al}_2\text{O}_3$  layer <sup>→ 针对 Al only</sup> (impermeable to water & air)
- Advantages
  1. enhances corrosion resistance
  2.  $\text{Al}_2\text{O}_3$  provides smooth surface → easier to dye

Pure Al	Anodised Al
 <p>rough surface ↓ hard to dye</p>	 <p>smooth surface ↓ easy to dye ( dye can firmly attach to surface )</p>

3. ↑ Al thickness
4. ↑ Al hardness
- ☆ strength 没有上升

## 2 Process

- 过程:  $Al \rightarrow Al_2O_3$
- ★ industrial process, below is simplified version



→ 不知道实际原理, 但  $\text{Al}_2\text{O}_3$  不会落进  $\text{H}_2\text{SO}_4(\text{aq})$  里