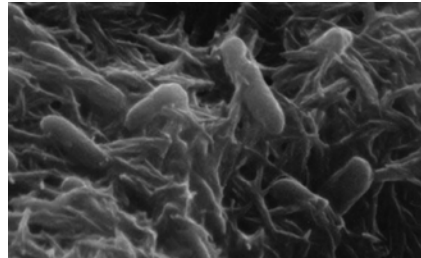


微生物を用いたIOTセンサー  
IOT sensor network with  
Microbial Fuel Cell

# Microorganism

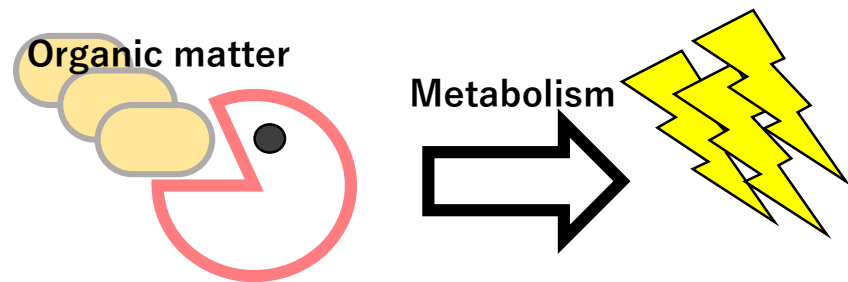
- Electrogenic bacteria  
They are ubiquitous throughout the world's soil
- Metabolism (Metabolization)  
When they metabolize, they let electrons out to acceptor
- Electron supplier & Electron acceptor  
→Organic matter & Electrode or Oxygen
- Anaerobic environment at Anode



*Shewanella*

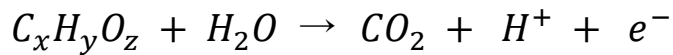


*Geobacter*

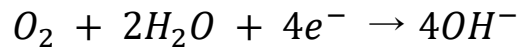


# Sediment Microbial Fuel Cell

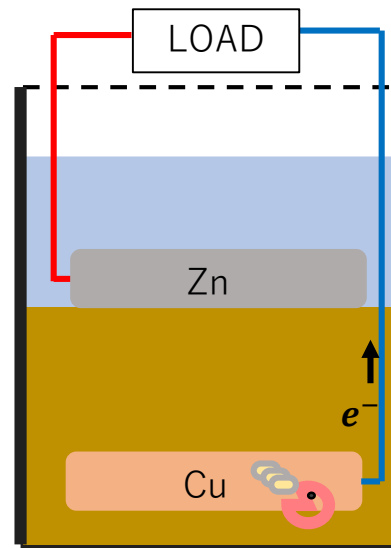
Anode reaction



Cathode reaction



- Soil : Mulch
- Electrode : zinc and copper
- Substrate :  
Vinegar(acetate)
- Water : much



# 微生物によるIoTセンサー用電源開発

