

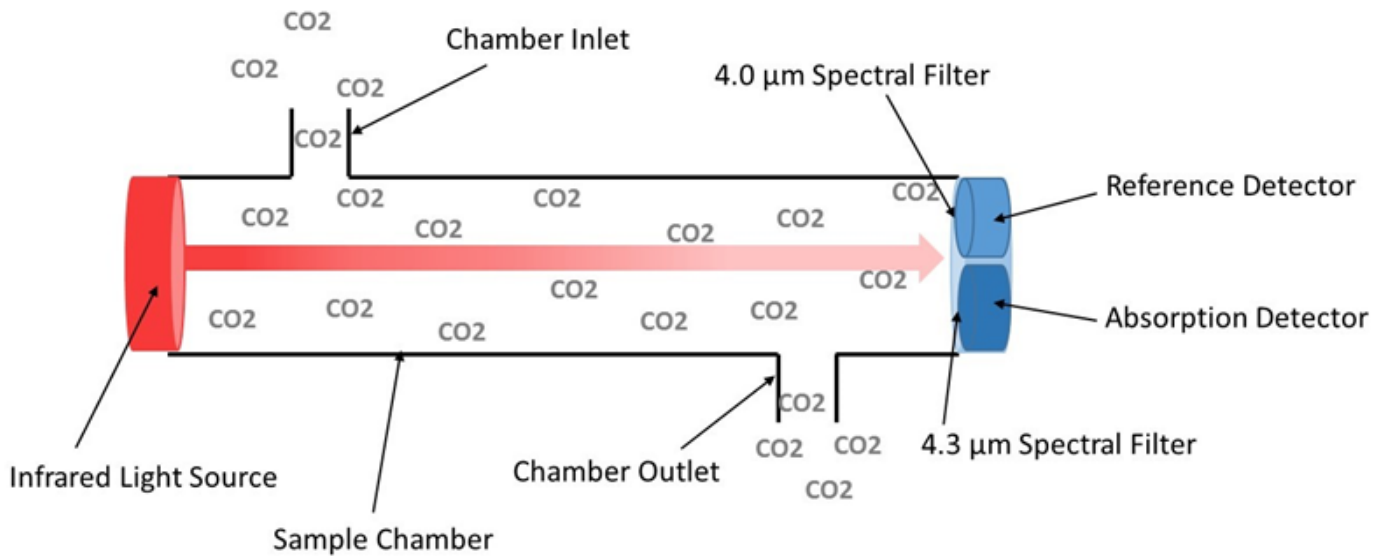


The recent Great Barrier Reef Outlook Report for 2009 (by the Australian Government) states that if we want to keep the reef alive we need to halt carbon dioxide (CO₂) in the atmosphere at current levels around 400 parts per million (ppm). We are approximately adding a further 2ppm every year. So in 50 years if we keep going with business as usual we will hit 500ppm by 2050. According to the Reef Outlook Report, "At a concentration of 500ppm, it is predicted that many components of the Great Barrier Reef ecosystem would be highly vulnerable, including sea-birds, fish, marine reptiles and plankton. At about this concentration of carbon dioxide, hard corals would likely become functionally extinct and coral reefs would be eroding rapidly."

HydroC™ CO₂ Sensor

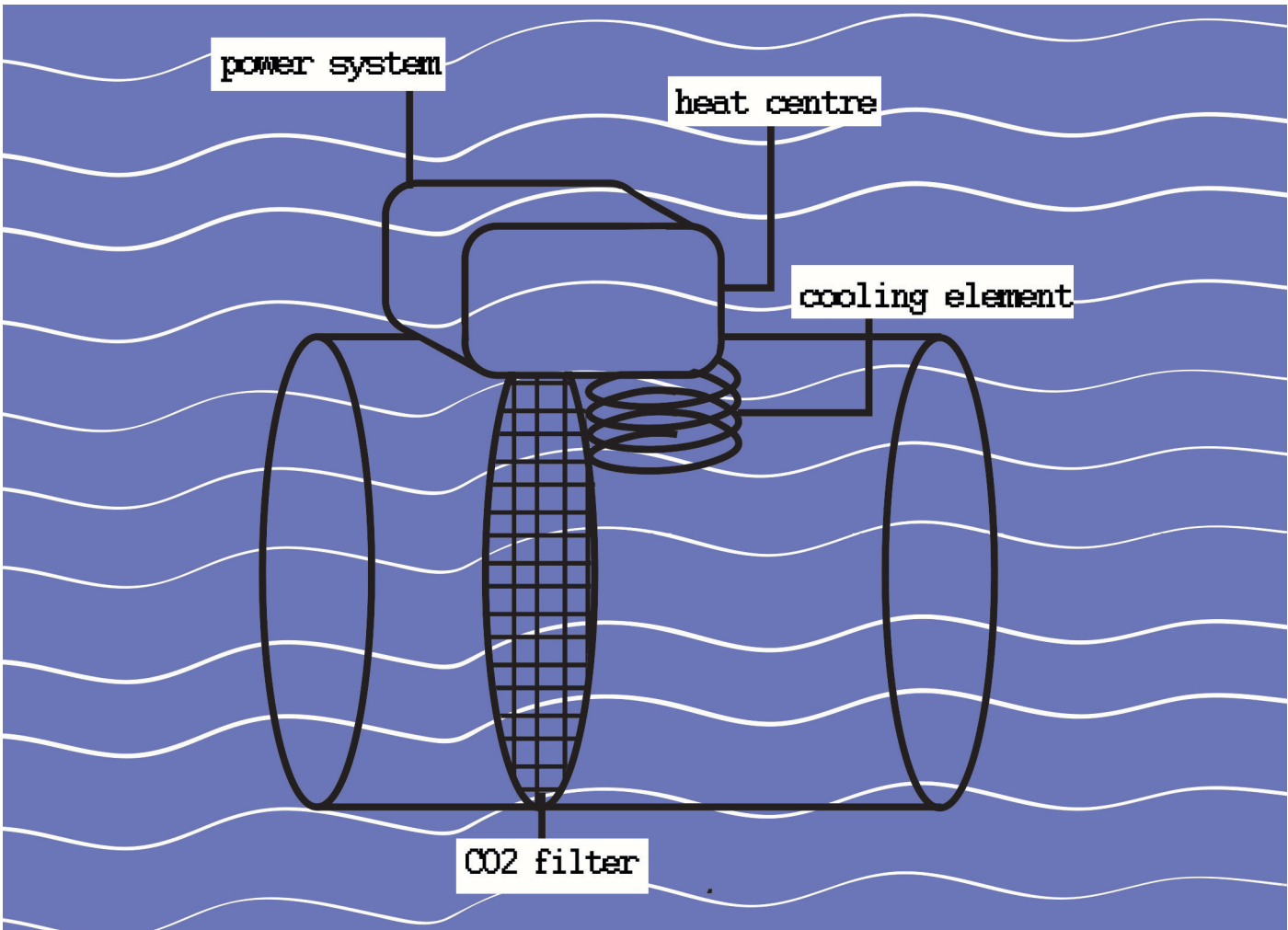
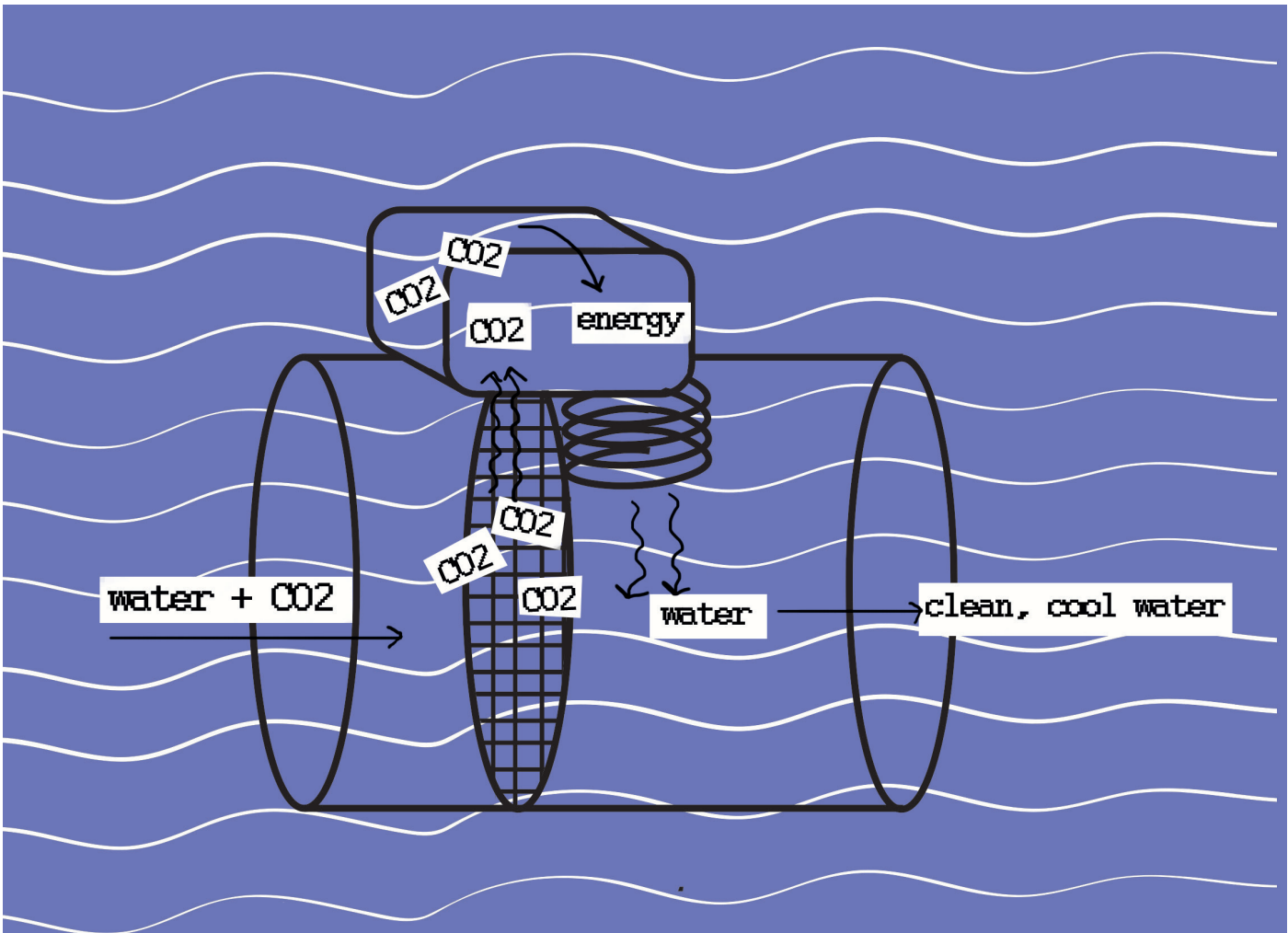
The CONTROS HydroC® CO₂ sensor is a unique and versatile subsea / underwater carbon dioxide sensor for in-situ and online measurements of dissolved CO₂.





A small cooler in the water with a heat sensor so when it measures that the water is too hot it will turn on and cool down the water around itself. These coolers/ filters could be disguised as coral or rocks so that the overall looks in the coral reef do not change.

Based on the results from the studies at Harvard, NSLS-II, CFN, and additional institutions, the scientists discovered single nickel atoms catalyzed the CO2 conversion reaction with a maximal of 97 percent efficiency. The scientists say this is a major step toward recycling CO2 for usable energy and chemicals. "To apply this technology to real applications in the future, we are currently aimed at producing this single atom catalyst in a cheap and large-scale way, while improving its performance and maintaining its efficiency," said Wang.



OTHER IDEAS

WALKING POT

Generally, it is easy to take care of your indoor plants! One of the primary concerns for houseplants is making sure they get enough light. There are some plants that need 'full sunlight' that means 4-6 hours of direct light per day. But as the time goes the sun goes away - especially if your windows are facing the North East side of the house.

This problem inspired the „walking pot”.

the plant needs sunlight - this sunlight could be used as power - this power could move the pot

Our aim was to create a pot that can follow the sunlight - as the sun moves the pot could follow it

As the sun moves - the shadow would reach the pot - the pot would perceive it and the direction of it - and finally move to the other direction with solar power.

A more distant goal would be if the pot could find the sunlight by itself!

BIOMIMIKRI: THE CAMOUFLAGE FUR

Polar bears aren't actually white!

Polar bears fur is transparent and hollow. As the light reaches its surface some of them are absorbed while the rest is scattered away. As a result, the fur can appear in different colours under different lighting. Normally the polar bears look white - because it is scattering sunlight which is also white. At sunset, they can be reddish orange, on a cloudy day they can look grey.

What if we could re-produce their fur?