



My Digital Career

Michael Seo *Research Scientist*

GraphAir is a nano-material that I developed that, if we are lucky, will allow everyone to drink their own sewerage!

Two billion people don't have access to safe drinking water today and the rest of us are certain to run out of water soon because of population growth and climate change. If we want to survive in the future we are going to have to recycle water or desalinate the oceans. GraphAir can do both.

GraphAir is a kind of Graphene but to make Graphene you need expensive and dangerous gases. One day I wondered, if we could use something else. I did some research and realised Graphene's structure looks a lot like cooking oil. I bought in some used cooking oil and it made Graphene.

But normal Graphene is waterproof and this isn't. GraphAir's honeycomb structure lets through water but nothing else. Water is smaller than the gap but salt, lead, germs and even poo are larger. Nothing can pass through except water. This is a huge change that allows us to drink sea water, recycled water, even sewerage, over and over, giving us safe, sustainable, unlimited, fresh water.

My career is not digital in the traditional sense, I don't use computers a lot. I spend most of my time talking, thinking crazy things and getting my hands dirty. But I couldn't do my job without technology either. We use it for testing, for learning and communicating with other scientists. Technology is like a glue, connecting all parts of my work.

So, technology is very important for my career but probably not as important as cooking oil!

Class Discussion

Michael identified water security as a big problem in the future. What are some other solutions to this problem?

Can you think of another big problem facing people in the future?

What are some potential solutions to your big problem?