The newest innovations in solar power

The future looks bright for solar power, which is just as well given it only functions in direct sunlight, right? Wrong. Worldbuild365 have found the newest innovations in solar power which promise to make this source of energy more versatile than could ever have been imagined. The current stereotype of solar panels is that, while they are a good idea in principle, they are too impractical to become the leading source of renewable energy we all hope for. Soon however, we can add this to the list of outdated stereotypes as the new generation of solar panels spread to all corners of the globe, and beyond.

Space. One thing that is absolutely essential for the massive arrays of solar panels that would be necessary to power the globe. And where is there a lot of it? Space. DHV Technology is a relatively young Spanish company with big ambitions. They want to put solar panels in space. Too aesthetically displeasing? So what? They're about to be launched into space attached to a satellite so now you can enjoy all the extra energy with none of the eye-watering consequences.

But the industry's innovators aren't just looking up, they're looking sideways, which means statistically, they're looking at water, and if you live in the Netherland's, there's a good chance you may see solar panels winking back at you. With 7,650km2 of freshwater available and ever-increasing demand for solar energy, the Netherlands may well become a world leader in terms of solar panels on water, but it can expect stiff competition. Asia appears the most likely location of the challenger, with China, India and Japan all in line to make their own attempts to top the global charts. China may well be the bookies' favourite, what with the government's promise to cut GHG emissions by 18% by 2020. The country's enormous appetite for energy has been predominantly sated by fossil fuels leading to over a million deaths annually due to air pollution. With the advent of floating solar panel technology, these numbers should hopefully see a swift decline.

In many countries, inefficient, expensive renewable energy is just not a viable option. But what if it weren't inefficient of expensive? Then it would most likely be a SunSaluter. Brainchild of Eden Full Goh, the SunSaluter not only provides solar energy in a more-efficient-than-ever way, but also 4 litres of clean drinking water every day. And it's cheap. All the new construction materials used can be locally sourced so the entire thing costs $3-4, and what's more, due to the genius design, the SunSaluter rotates as the day goes on so that it always faces the Sun, unlike today's solar panels.

Not being excited by molybdenum di-telluride is among the more forgivable sins, it's hardly the most awe-inspiring name. However, if you're interested in having solar panels interwoven in your shirt, then molybdenum di-telluride might just be your new best friend. Courtesy of the PhD research of Nicola Townsend into the properties of super-thin materials, a proposition has arisen of creating a shirt that is part solar panel.

One of the major sources of pollution is from vehicles, so the desire of some to transfer to electric cars is understandable. Unfortunately, the transition is also impractical with there being few places to recharge batteries. Elon Musk is one who sees a possible solution: the Sun. If our cars could run efficiently on solar energy, then the only recharging station necessary would be

the Sun. “But what if it’s raining?” I hear people living in England crying. Fear not, China can save us.

Recent research by Chinese scientists has uncovered a way of creating a solar panel that gives energy when rained on. By coating the underside of the panel with a layer of graphene, complex chemistry happens due to the positive ions present in the rain, resulting in electricity. This may not make much sense, but the gist of it is this: if it starts raining, flip your panel over and it will keep generating energy for you.

But that’s not the only innovation in the world of solar panels. Now, not just rainy days but cloudy days too can be removed from the no-energy-produced-on-this-day category. While this research isn’t massively advanced, there is plenty to be excited about. A team of scientists have found a way to breed bacteria genetically engineered to have a lot of Lycopene, a natural dye that is very good at absorbing sunlight. Following more complex science, a biogenic solar cell is created which has a density of 0.686mA/cm2! (nearly twice the previous record for biogenic cells). This too promises revolution in the solar power industry in providing solar cells that give energy even when it’s cloudy.

In an market expected to reach $90billion in the US by 2025, this spate of innovation bodes well for the future of our planet.