

Press release
Geneva, 19 April 2024

A solution for breaking down the microplastics that pollute water has won the Grand Prix at the 49th International Exhibition of Inventions Geneva.

The brainchild of an Omani biologist, the process destroys the plastic particles present in marine ecosystems and may become a highly effective solution in the fight against this widespread pollution.

On Friday 19 April 2024, the Grand Prix of the 49th International Exhibition of Inventions Geneva was awarded to Sumaiya Al Siyabi from the Sultanate of Oman for her process of degrading microplastics in water by combining biology and nanotechnology.

Sumaiya Al Siyabi's solution addresses one of the main sources of pollution on Earth. Almost 460 million tonnes of plastic are produced every single year, a significant proportion of which ends up in water where it deteriorates and becomes microplastics. In Switzerland alone, 15 tonnes of these fragments end up in lakes and rivers every year. They are ingested by marine life and in turn end up in the human body, with as yet unknown consequences on our health.

The brainchild of this Omani biologist combines microbial mats and nanomaterials that, together with light, are effective in breaking down microplastics in just a few hours. The process helps to make water clean and habitable for marine life.

Environmentally friendly, effective, inexpensive and, most importantly, suitable for large-scale application, this invention won over the members of the judging panel. Sumaiya Al Siyabi has already planned to adapt her invention so it can be used in the form of balls that will float above the microplastics in water to capture and eliminate them.

[Photo of the prize-winner](#)

Many other prizes were awarded to a wide range of inventions among the 1,035 submitted this year.

[List of awards](#)

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