

# 3D-PRINTING PLANT LAUNCHED FOR WATER FILTRATION MEMBRANE PRODUCTION

The technology prints millions of nanofibers over each other to form the membrane



A water technology startup by the name of Nano Sun [has unveiled a new facility that will utilize 3D printers](#) to create and manufacture water filtration membranes. Ordinarily, membranes are created utilizing acids to make porous polymers, this new method will use the printers to layer millions of nanofibers over each other in order to create a thin membrane.

Nano Sun was founded by Darren Sun, a scientist who was previously an associate professor at [Nanyang Technological University, Singapore](#). According to Sun, the nanofiber membrane created in the new process wields a faster flow rate than usual polymer membranes while maintaining the same pollutant rejection rate.

The 3D printer prints the nanofibers onto a backing material, which is then compressed into a thin sheet of membrane. This process leads to a larger surface area on the membrane, allowing it to capture or repel pollutants while optimizing the water flow rate. The technology also allows for the alteration to create either microfiltration or ultrafiltration membranes.

The filter could potentially lead to [the construction of smaller wastewater treatment plants](#), which would mean significant cost reductions to construct and operate the facilities.

The new filter will be implemented quickly, as two semiconductor multinational companies based in Singapore and a wastewater treatment plant with treatment capacity of 20 million liters per day will soon make use of the nanofilter.