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## **Awarded Patent for Water Desalination Aided by Graphene-based Membranes**

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GRAFOID has announced the World International Patent Organization (WIPO) publication of a patent for an efficient water desalination membrane. Based on their researches, water desalination is absolutely essential, and the water treatment market is expected to grow 7.4% over 2017-2020. The global membrane market is also expected to reach \$ 11.96 billion by 2021.

[Grafoid Inc.](#) ("GRAFOID" or the "Company"), a global leader in the graphene products and applications market, announced today that the World International Patent Organization (WIPO) has published international application number PCT/SG2019/050021 covering a graphene-based membrane, specifically a free-standing graphene-based membrane, and a method of forming the same.

The invention relates to a graphene-based membrane which contains properties making it suitable for use in the forward osmosis (FO) process of water desalination. Specifically, the membrane performs at least seven times (with respect to water flux) and three times (with respect to reverse salt flux) better than a commercial cellulose triacetate membrane in forward osmosis due to its smaller interlayer distance and resistance to swelling.

This significant patent application recognition underscores Grafoid's close collaborative efforts with the National University of [Singapore](#) (NUS) and our other partners and further reinforces our commitment to the commercialization of graphene-based products and solutions. Grafoid remains confident that, through close collaboration with our industry partners including the NUS, Focus Graphite and others, our products in development worldwide are at the forefront of technological breakthroughs and will have wide-reaching impacts on the water treatment and other important markets.

According to the industry research firm Future Market Insights, the reuse of water is absolutely essential and the water treatment market is poised to grow at a CAGR of 7.4%

from 2017-2027.<sup>1</sup> Additionally, the global membrane market is projected to reach \$11.95 Billion by 2021, growing at a CAGR of 10.3% during the time period 2016-2021.<sup>2</sup> We believe the commercial adoption of Grafoid technology in this sector is poised for tremendous growth and we are confident in our market position and ability to penetrate enterprise markets including water treatment, the oil and gas industry, among other end markets.

Dr. Kiran Kumar Manga, Consultant Regional Manager of Engineering of Grafoid commented, "In the worldwide effort to alleviate the shortage of suitable drinking water of the World's growing population, Grafoid's technology for the graphene-based membrane is an important step forward to develop the energy-efficient water desalination process."

"The publication of this important international patent application is validation that Grafoid's platform for water desalination may be unique," said Gary Economo, CEO of Grafoid Inc. "We are very proud of this important milestone and we remain excited about this product category within the Grafoid family of products and solutions."

Read the [original article](#) on GlobeNewswire.