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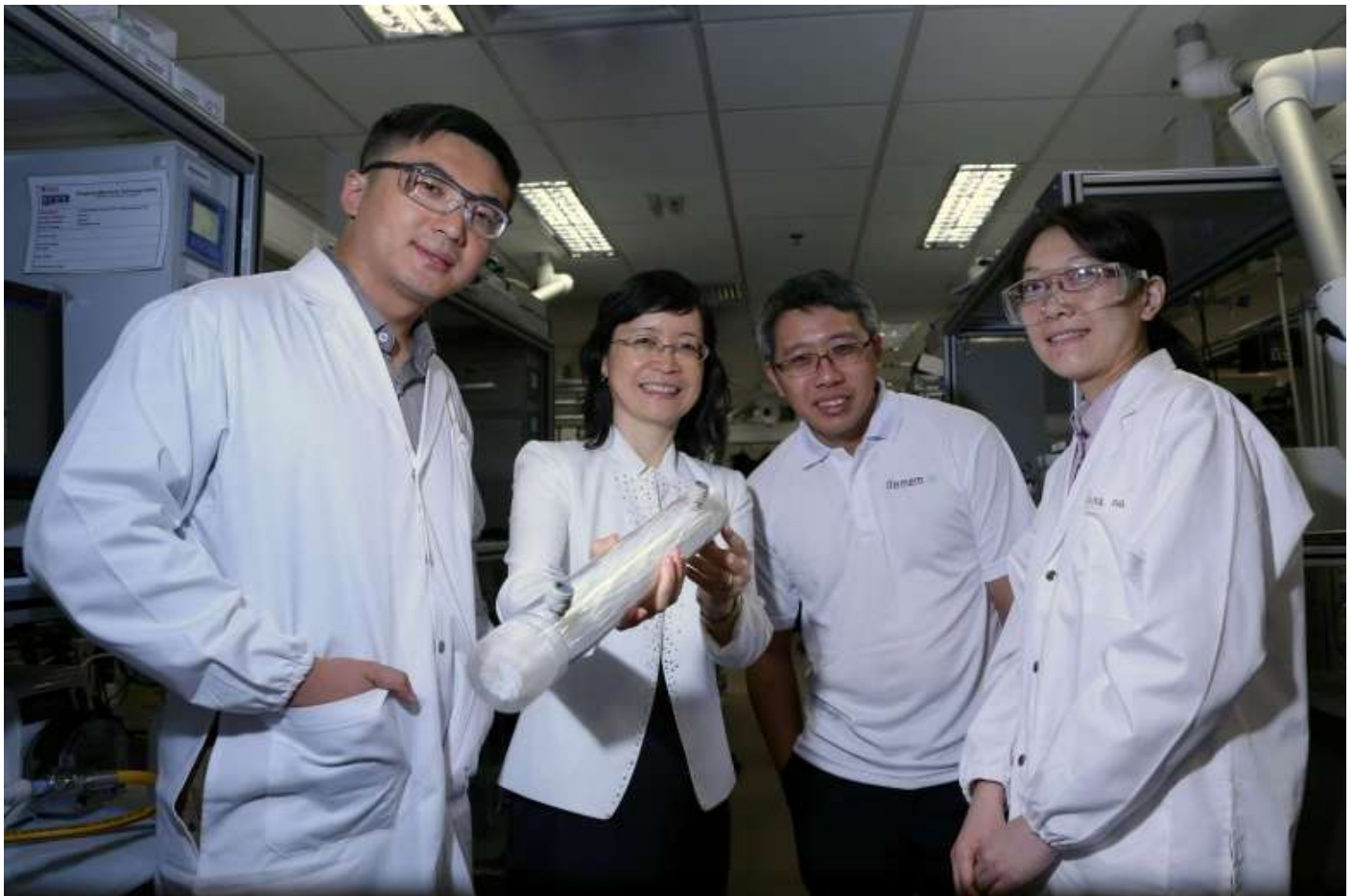
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New filter by NTU scientists could cut industrial waste water treatment cost by 30 per cent



(From left) Senior research fellow Shi Lei, director of Singapore Membrane Technology Centre Wang Rong, chief technology officer of De.mem Adrian Yeo, and research fellow Zhao Shan Shan with the new filter. PHOTO: TIFFANY GOH FOR THE STRAITS TIMES

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SINGAPORE - Scientists here have developed a new type of filter that could cut the cost of industrial waste water treatment by 30 per cent.

It could also reduce the energy needed by up to five times as it requires only a low level of water pressure to filter out contaminants.

Using reverse osmosis membranes - the conventional method of filtering waste water - requires at least five times more water pressure.

"Our new membrane is easy to manufacture using low-cost chemicals that are 30 times cheaper than conventional chemicals, making it suitable for mass production," said Professor Wang Rong from the Nanyang Technological University (NTU), who led the development.

The technology was unveiled at NTU on Thursday (July 7).

The new membrane is able to do the work of both ultrafiltration membranes and reverse osmosis membranes. Presently, these two types of filters have to be used together to treat industrial waste water from the oil and gas sector, for example.

It took two years to develop at NTU's Nanyang Environment and Water Research Institute, and has been tested on actual industrial waste water in the laboratory.

The membrane will next be tested at an NTU spin-off company, De.Mem's waste water plant by the end of the year. The trial will last six months.

Presently it costs about \$60 to \$80 to treat one tonne of industrial waste water.

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