Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Membrion raises further funding to commercialise its membrane technology and develop manufacturing facility

In the USA, Membrion has raised further funding to help it commence commercial production of its membranes and develop a manufacturing facility in Seattle.

The manufacturer of low-cost, high-performance ion-exchange membranes closed its oversubscribed Series A round with a total of $6 million, led by Bellingham Angel Investors, including participation from existing investors and new funding from WRF Capital and SeaChange Fund.

The company previously raised $2.23 million in an oversubscribed series seed funding round – putting the company on the path to commercialisation (Membrane Technology, January 2019, page 7).

Membrion says that although its ion-exchange membranes are applicable across a range of industries, it is focusing on the multi-billion dollar water desalination market, which is expanding because of increased demand for membrane technology to address shortages of fresh water worldwide.

The firm uses silica gel – an inexpensive, non-toxic material that is often packaged with new shoes, beef jerky and many other consumer products – to produce what is describes as a novel class of commercial ceramic membranes. Its technology converts the highly absorbent, small-pore silica gel into flexible ceramic membranes that can be engineered to meet the needs of a wide range of applications. It does so at a dramatic cost reduction relative to current industry leading membranes.

It manufactures membranes that are purpose-built for electrodialysis reversal (EDR) equipment, which desalinates “brackish” water that is most often found in estuaries and underground aquifers and, traditionally, has been too difficult and expensive to purify.

Membrion claims that its membranes can now reduce the cost of desalination by up to 30%, which means it can unlock the potential of brackish water as a source of fresh water.

Commenting on the funding, Dr Greg Newbloom, CEO, Membrion, and the company’s founder, said: ‘The continued support of our current investors as well as WRF Capital and SeaChange is testament to the potential of our team and technology to address one of the world’s most pressing problems – access to clean water.’

‘With this funding, we are thrilled to move from the lab to commercial production, developing a new manufacturing facility and ramp up production for customers.’

For further information, visit: www.membrion.com, www.bellinghamangelinvestors.com, www.wrfcapital.com & www.seachange.fund

De Nora technology supports the fight against the spread of coronavirus

Industrie De Nora SpA, a provider of electrodes and coatings for electrochemical processes, is helping to fight against the spread of coronavirus.

In Italy, the company is supporting the efforts of the Civil Protection Department by deploying four electrochlorination systems to “red zones” in Codogno, 70 km (about 44 miles) south of Milan.

These systems produce sodium hypochlorite, a chlorine equivalent that is suitable for the disinfection of hard surfaces and, according to the World Health Organization (WHO), is effective against the proliferation of the COVID-19 virus.

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**EVENTS CALENDAR**

| Date         | Event                                                                                                                                                         | Location          | Contact                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------|
| 17–20 June 2020 | XIII Scientific Conference 'Membranes and Membrane Processes in Environmental Protection' | Zakopane, Poland | [For more information](http://mempep2020.systemcoffee.pl)                                 |
| 20–21 August 2020 | The Water Show Africa 2020                                                                                                                                      | Johannesburg, South Africa | [For more information](http://www.tarapinn.com/exhibition/water-africa/conference.stm) |
| 30 August to 1 September 2020 | Global Water Summit 2020                                                                                                                                          | Madrid, Spain     | [For more information](http://www.biochemica.co.uk)                                       |

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**Veolia Water Technologies’ UK operation buys water and wastewater treatment specialist**

Veolia Water Technologies’ operation in the UK recently acquired Biochemica Water Ltd, a water and wastewater treatment specialist which focuses on service areas that include controlling Legionella – the bacterium which causes legionnaires’ disease – monitoring and management services, wastewater treatment, boiler and cooling water treatment, and chemical supply.

According to Veolia Water Technologies UK (VWT UK), the move will see it become one of the UK’s leading end-to-end suppliers to the municipal and industrial sectors – one of the few genuinely able to provide a complete package of technologies and services, covering process water, wastewater, drinking water, sewage and sludge treatment, cooling water and hygiene chemicals, ranging from drinking water treatment to microbiological control in cooling towers, using a simple saline solution (water and salt) and electricity to produce chlorine-based disinfectant.

The company has already provided similar systems in China, Japan and Singapore for the sanitisation and disinfection of offices and production sites in response to COVID-19 outbreaks. The city of Nankang is using two systems supplied by De Nora, originally for water purification, to aid in the disinfection of buildings and other public areas.

In 2019, De Nora launched its next generation of ClorTec® on-site sodium hypochloirite generators (Membrane Technology, October 2019, page 2). The latest high-efficiency ClorTec Gen III system uses an optimised electrochlorination process that reduces salt and power consumption to deliver a 15% operating cost savings over the previous ClorTec DN Gen II system (Membrane Technology, November, 2018, page 3).

For further information, visit: [www.denora.com](http://www.denora.com)

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**Continued from front page**

De Nora says that one of the advantages of on-site electrochlorination systems is that they do not require or generate hazardous chemicals and there is no need for transportation of high-concentration bleach, so safety is never compromised.

De Nora electrochlorination systems produce sodium hypochlorite using DSA® electrodes, invented by Oronzio De Nora, the company’s founder, in the 1970s.

On-site sodium hypochlorite generators are used worldwide for a variety of applications, ranging from drinking water treatment to microbiological control in cooling towers, using a simple saline solution (water and salt) and electricity to produce chlorine-based disinfectant.

The company has already provided similar systems in China, Japan and Singapore for the sanitisation and disinfection of offices and production sites in response to COVID-19 outbreaks. The city of Nankang is using two systems supplied by De Nora, originally for water purification, to aid in the disinfection of buildings and other public areas.

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**For full details, visit:**

[www.veoliawatertech.com](http://www.veoliawatertech.com) & [www.biochemica.co.uk](http://www.biochemica.co.uk)