

DEWA's R&D Centre launches its second Transactions Report

Dubai, UAE, 9 June 2022: Dubai Electricity and Water Authority (DEWA)'s Research and Development Centre has issued its second Transactions Report, which contains the Scopus Indexed scientific and research papers that the Centre published in international scientific conferences and journals in 2021. The report includes 31 research papers with an increase of 100% in scientific papers published by the Centre in 2020. The articles focused on solar energy, water, energy efficiency, smart grid integration, Fourth Industrial Revolution technologies, space technologies, and energy systems analysis.

HE Saeed Mohammed Al Tayer, MD & CEO of DEWA, commended the efforts by researchers and the team at the R&D Centre to support DEWA's objectives in making the R&D Centre a global platform for promising technologies and delivering Emirati research projects to international academic institutions. This raises performance indicators in scientific research in the UAE and enriches the scientific community in Dubai, the UAE, and the world.

"Our vision is guided by the words of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, who once said, 'Our future plans require a solid foundation of scientific research, which comply with our aspirations'. We work to make the UAE and Dubai an incubator for scientific innovations. This is in accordance with the UAE Centennial 2071 to make the UAE the world's leading nation, and the Dubai 10X initiative to aid Dubai's progress into leading the future by making it 10 years ahead of other cities. The R&D Centre contributes to protecting DEWA's position at the forefront of global utilities and developing the talents of Emirati researchers and their capabilities," added **Al Tayer**.

"The R&D Centre at the Mohammed bin Rashid Al Maktoum Solar Park includes 44 researchers including 26 master degree and PhD holders. Since its launch, the Centre has launched 84 research papers at international scientific conferences, journals and publications. The Centre registered 5 patents and there are more underway," said **Eng. Waleed Bin Salman, Executive Vice President of Business Development and Excellence at DEWA**.

"Our goal is to become a globally recognised platform for developing and demonstrating emerging solutions for future energy and water systems. We are proud of the results achieved so far, which is a result of the continuous support of DEWA's top management and the commitment of all teams to work as one," said **Dr. Ali AlAleeli, VP - Research and Development at DEWA's R&D Centre**.



The report includes several important subjects such as: the identification of UV damage patterns in EVA encapsulants in PV modules; a consolidated review and comparison of all ageing defects in PV modules in arid climates; a detailed model of scaling processes for Reverse Osmosis membranes validated using the PVRO facility; a calibrated model to forecast monthly electricity demand by account using actual DEWA data and environmental conditions; the use of IoT and Virtual Power Plant data for fault detection; advances in 3D printing technology and an extensive review of the potential of ionic liquids for supercapacitor electrolytes.

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