

Press release

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EFCE-EMS Joint Excellence Award granted for excellence in the development of thin-film composite membranes for nanofiltration

Dr. Cédric Van Goethem has been named as the winner of the **2021 EFCE-EMS Joint Excellence Award in Membrane Engineering** for his excellent PhD thesis "*Preparation and characterization of novel thin-film nanocomposite and asymmetric nanofiltration membranes*", completed at KU Leuven under the supervision of Prof. Ivo Vankelecom. He achieved the best evaluation results in terms of breadth and depth of the study, scientific impact including industrial relevance, innovation, dissemination of the results, and especially the way in which his experience was transmitted to younger researchers.

The award jury stated: "He has an impressive record of publications, being first author in seven journal articles."



His work covers (1) the development of membranes with high stability to be used in solvents or in conditions of extreme pH, and (2) the development of thin-film composite membranes with special fillers with high selectivity in nanofiltration. Nanofiltration (NF) and solvent resistant NF (SRNF) have the potential to provide an energy efficient and easily scalable alternative separation technique for many separation problems with industrial and societal relevance. For (SR)NF to fully live up to this promise, membranes with enhanced separation performance and stability have to be developed. Through the use of advanced characterization methods, Cédric managed to get a detailed fundamental understanding on how nanocomposite membranes are formed and how they work. Aside from that he developed crosslinked PVDF as a novel material for membranes. His work demonstrates a comprehensive knowledge of the state-of-the-art and high level of creativity to propose innovation far beyond that.

Nominating him for the Award, Prof. Vankelecom stated: "Cédric has a research maturity level and scientific enthusiasm that I had so far never experienced in a junior postdoc. No doubt, Cédric is a top-researcher, probably the best PhD student I had over the 70+ that I supervised so far, with a creative mind and keen interest in a broad range of aspects of research."

Cédric Van Goethem obtained his Bachelor and Masters' degree and his PhD in Bio-Science Engineering from KU Leuven, Belgium. Following completion of his PhD, for one year he held the position of Postdoctoral Researcher at KU Leuven. In November 2019, he obtained a postdoctoral fellowship from Research Foundation Flanders (FWO). While associated to the Membrane Technology Group (MTG) of Prof. Ivo Vankelecom at KU Leuven, he established an independent research project on molecular separations using polymeric and composite membranes. In May 2020, he temporarily paused his FWO-fellowship and joined the Laboratory for Advanced Separations of Prof. Kumar Varoon Agrawal at EPFL, Switzerland as a postdoctoral researcher. The work spans from fundamental investigation into graphene crystallization and its relation to gas (molecular) sieving, to upscaling membrane synthesis by 4 orders of magnitude.

The award was presented to Dr. Van Goethem on 22 September 2021 at the Session *Membranes I* of ECCE13&ECAB6 held as a virtual conference on 20-23 September 2021.

The Excellence Award is generously supported by The European Membrane Society (EMS).

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Notes to media

For further information, please contact:

Claudia Flavell-While
tel: +44 (0)1788 534422
email: Claudia@icheme.org

About the sponsor

The European Membrane Society (<https://www.emsoc.eu>), founded in 1982, is an international non-profit organization whose aim is to promote cooperation between scientists and engineers involved in Research and Development in the field of synthetic membranes and membrane processes

About chemical engineers

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About EFCE

Founded in 1953, The European Federation of Chemical Engineering (EFCE) is a non-profit-making association, whose object is to promote co-operation in Europe between non-profit-making professional scientific and technical societies in 30 countries for the general advancement of chemical engineering and as a means of furthering the development of chemical engineering. See www.efce.org