

2nd International Conference on Materials Science and Research

September 26-27, 2018 Frankfurt, Germany

New Frontiers for Novel Advanced Membrane Technologies

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Clean water as basic human need is not available to 1.4 -1.8 billion people around the world. It is essential to direct current research trends toward sustainable water and wastewater treatment technologies that can solve the existing industrial and environmental issues, especially when it comes to solutions that can be successfully commercialized on the global scale. Membrane applications are the most effective and sustainable methods of addressing environmental problems in treating water and wastewater to meet or exceed stringent environmental standards. Nevertheless, membrane fouling is one of the primary operational concerns that is currently hindering its widespread application. My major research focus is to optimize synthesis of biomimetic membranes designed with antifouling, and selective permeation that will pave the way for the production of clean water.

Biography:

Dr. Amira Abdelrasoul, P.Eng. is an Assistant Professor in the Chemical and Biological Engineering Department at the University of Saskatchewan. Prior to joining the University of Saskatchewan in 2017, she was a Lecturer and Postdoctoral Research Associate in the Department of Chemical Engineering at Ryerson University in Toronto, Ontario. Dr. Abdelrasoul received her PhD degree in Chemical Engineering in 2015 from Ryerson University with the Governor General's Academic Gold Medal and the C. Ravi Ravindran Outstanding Doctoral Thesis Award. Her research interests focus on Membrane Science and Technology for Water and Energy Sustainability, and Biomedical Applications; Process Modeling, Simulation, and Optimization of Complex Systems; and Biomimetic Nanomaterials for Advanced Technologies and Biomedical Applications. Her outstanding contributions in the field were recognized with numerous prestigious excellence awards. In addition, Dr. Abdelrasoul is a licensed Instructional Skills and Educational Development Facilitator and a fellow of the Educational Development Association.