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Name	Samaneh Shahgaldi	
Affiliation	University of Quebec Canada	
Invited Keynote Lecture		
Presentation Title	**Membrane Electrode Assembly for Proton Exchange Membrane Fuel Cells**	
Abstract (Approximately 200 words)	The current energy reliance on fossil fuels is predominantly responsible for the release of green house gases (GHGs) and their increasing concentration in the atmosphere, which are already having a cataclysmic impact on the environment, human health, and the economy. In order to mitigate the unremittingly rising levels of GHGs in the atmosphere, Canada's current energy paradigm urges a radical transformation. Development of an at-scale, clean hydrogen economy is a strategic priority for Canada, required to diversify our future energy systems, generate economic gains, and achieve net zero emissions by 2050. Proton exchange membrane (PEM) fuel cells generate electricity using hydrogen and oxygen through a catalyzed electrochemical reaction at low temperature and are a compelling option for clean mobility and power generation. PEM fuel cells offer a broad range of advantages for the environments and our nations energy security. However, durability and cost are the two main challenges in the mass production and commercialization. These two interrelated issues are greatly impacted by various parameters, mainly associated with the membrane electrode assembly. This presentation will discuss the role of MEA manufacturing techniques on catalyst utilizations and also will discuss the important role of each components on the cell performance and durability.	
Biographical Sketch (Approximately 200 words)	Dr. Samaneh Shahgaldi is an Associate Professor at the University of Quebec and an Adjunct Associate Professor at the University of Waterloo. She holds the Canada Research Chair (CRC) at proton exchange membrane fuel cells and electrolyzer. She is an award-wining researcher and a member of the editorial board of the International Journal of Green Energy. She was also a Senior Research Scientist at Cummins/ Hydrogenics dealing with different Fuel Cell and Water electrolyzer projects. She published more than 50 articles with over 1790 citations on hydrogen storage, production, fuel cells, nanomaterials, etc. Currently, her team are working on different fuel cells and electrolyser components such as membrane electrode assembly, catalyst, catalyst layer, and bipolar plates.	