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2021 WORLD FUEL CELL CONFERENCE

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Name	Shiming Zhang
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Invited Keynote Lecture

Presentation Title	**Modulation Strategy of Active sites in Carbon-based Electrocatalysts for Oxygen Reduction Reaction**
Abstract (Approximately 200 words)	Carbon-based electrocatalysts have shown the great potential of replacing platinum (Pt) in catalyzing the sluggish oxygen reduction reaction (ORR) at the cathodes of polymer electrolyte membrane fuel cells (PEMFCs). Active sites directly link to the catalytic activity of electrocatalysts. Generally, there are different types of active sites in the nonprecious metal carbon catalysts including metal-N_x species, N-C groups and so on, which play important roles in synergistically modulating the catalytic activity. In this talk, it will be discussed for the modulation strategy of different active sites to guide the design and development of the high-performance carbon-based ORR electrocatalysts.
Biographical Sketch (Approximately 200 words)	**Dr. Shiming Zhang** is currently an Associate Professor in College of Science/ Institute for Sustainable Energy at Shanghai University. Dr. Zhang received his Ph.D. in Electrochemistry from Wuhan University in 2014, with an experience of exchange student during 2013 at Nanyang Technological University, Singapore. He then mainly carried out the postdoctoral research from 2015 to 2019 at Shanghai Electrochemical Energy Device Engineering Technology Research Center, Shanghai Jiao Tong University. He was selected for the Shanghai Rising-Star Program in 2018. His expertise areas are electrochemical energy technologies, such as electrocatalysis, fuel cells, and Li-ion batteries.