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Impact of Diffusion Media on Performance and Durability in Electrochemical Systems

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Diffusion media are an integral component in electrochemical systems including fuel cells, water electrolyzers, and unitized reversible fuel cells (URFCs). Diffusion media facilitates efficient transport of reactants and products to and from the catalyst layer, enabling electron conduction, and providing mechanical support and thermal management. Advancing our understanding of the key properties of diffusion media—including pore size distribution, porosity, and wettability—is crucial for enhanced two-phase mass transport. By optimizing these functions, diffusion media directly influence the overall performance, efficiency, and durability of these systems enabling next-generation energy technologies. In this presentation, we will delve into the specific properties of diffusion media that impact both performance and durability, emphasizing their pivotal role in advancing electrochemical energy systems.

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References

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