CO_2 CAPTURE USING CARBONATE FUEL CELLS

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Abstract

The world faces a difficult "dual challenge" in the coming decades: how to provide low-GHG energy supplies to a growing population. This talk will present one technology option for how to continue to use our natural resources to create power, run factories, and the like, but not emit the CO_2 emissions, but rather capture the CO_2 and safely store it underground. Carbonate fuel cells have the unique property in that while they capture CO_2 from a flue gas source, they will also generate additional electricity and additional hydrogen. The hydrogen can be used in a variety of ways to also de-carbonize other energy consumers

Biography

Tim Barckholtz holds a PhD in Chemistry from Ohio State University. He has been with ExxonMobil for more than 18 years in a wide variety of roles. Early in his career, he helped commercialize an NOx reduction technology that was implemented in the company's Baytown Refinery. After a series of management roles, Tim returned to technology in 2011, and shortly thereafter discovered the unique action of the carbonate fuel cells. Tim is now the company's technical manager for all R&D in CO_2 capture and sequestration.

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