



Showcasing research from Professor Ryu's laboratory,  
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Aeroelectrolyte for atmospheric open electrochemical cells

Accelerating electrochemical reactions with gaseous components is key for energy applications like batteries and fuel cells. The conventional gas-based electrochemical cell system, confined by liquid or solid electrolytes between electrodes, hinders the easy and direct diffusion of gas reactants or products to and from the electrode surface. Our innovative open-structured cell, featuring an 'aeroelectrolyte' and a nanofiber salt bridge, enables direct engagement with electrodes. This approach, validated through modified Daniell cell experiments, promotes ideal three-phase boundaries for atmospheric reactions.

As featured in:



See Won-Hee Ryu *et al.*,  
*Energy Environ. Sci.*, 2024, 17, 6204.