

New phase of Li-O₂ batteries: Singlet oxygen

곽원진[†]

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Irreversible side reactions cause poor rechargeability and efficiency of lithium-oxygen batteries, and have predominantly been ascribed to the reaction of reduced oxygen species with cell components.

Recently, it was clarified that singlet oxygen (¹O₂) formed at the cathode accounts for the majority of parasitic reaction rather than reduced oxygen species.

In this presentation, I summarize the current knowledge about parasitic reactions of singlet oxygen in lithium-oxygen batteries and guide pathways to counteract this problem for reversible system.