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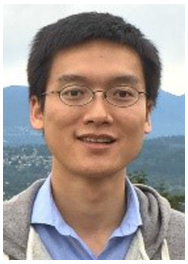
BATTERIES & SUPERCAPS
Cover Profile

Understanding the Reaction Interface in Lithium-Oxygen Batteries



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The front cover artwork is provided by Prof. Huang from Central South University, and Prof. Peng from Changchun Institute of Applied Chemistry, Chinese Academy of Sciences. The image shows how the current state of understanding the reaction interfaces in lithium–oxygen batteries reminds us of the parable of the blind and the elephant: Each person has his own opinion on which is the critical issue (the part of the elephant) and has a specific tool in hand. Read the full text of the Minireview at 10.1002/batt.201800083.

What was the inspiration for this cover design?

This cover design is inspired by the parable of the blind and the elephant, which reflects more or less the current state of the research in the topic reviewed here. We would hope to encourage people to avoid looking at a problem from only one direction and to instead probe the truth from different angles.

What prompted you to investigate this problem/topic?

The lithium–oxygen battery is envisaged as an ultimate energy storage device because it has the highest theoretical specific energy among all known battery chemistries. However, the reaction interface of this battery is very complex and related understanding is rather limited.

What other topics are you working on at the moment?

The group of Prof. Peng continues working on fundamental aspects of lithium–air batteries, ranging from identifying reaction intermediates to portraying the reaction mechanism, to unravelling how water and carbon dioxide affect the lithium-air battery. The group of Prof. Huang concentrates on developing theories for electrocatalytic interfaces and reactions, with the aim of sharpening our understanding.

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