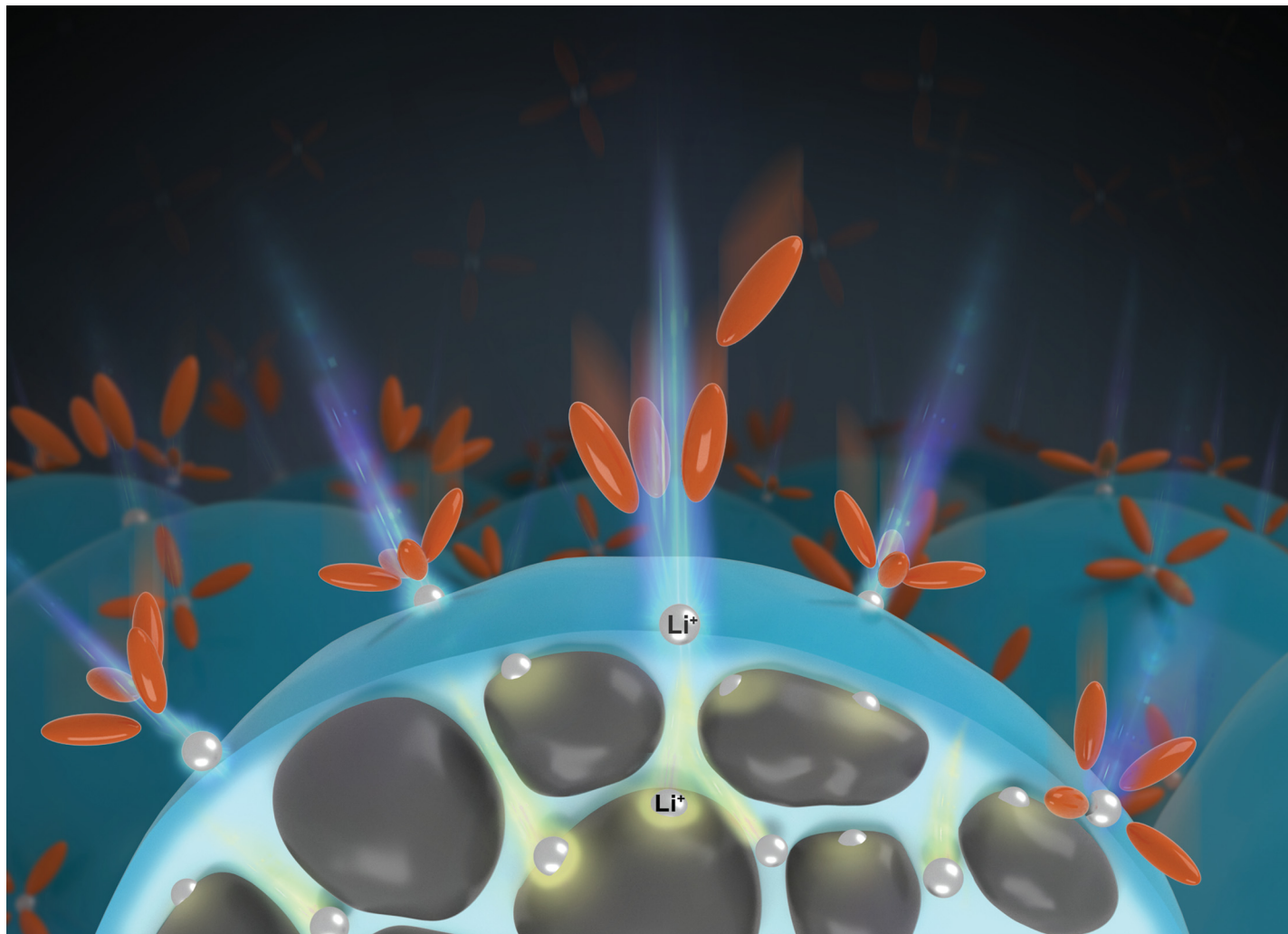




Showcasing research from Professor Yongming Sun's laboratory, Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, Wuhan 430074, China

Anode interphase design for fast-charging lithium-based rechargeable batteries

In this comprehensive review, we categorize anode interphases into two distinct types: outer and inner interphases, each defined by their unique physical and chemical environments within batteries. We delve into the functions of these outer and inner interphases, with a particular focus on their roles in enhancing electrochemical reaction kinetics and achieving superior cycling stability. Furthermore, we propose a design principle for the interphase that is tailored to different anode materials. Finally, we summarize the current state of research and understanding in this field, and offer insights into potential future developments in this area.

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