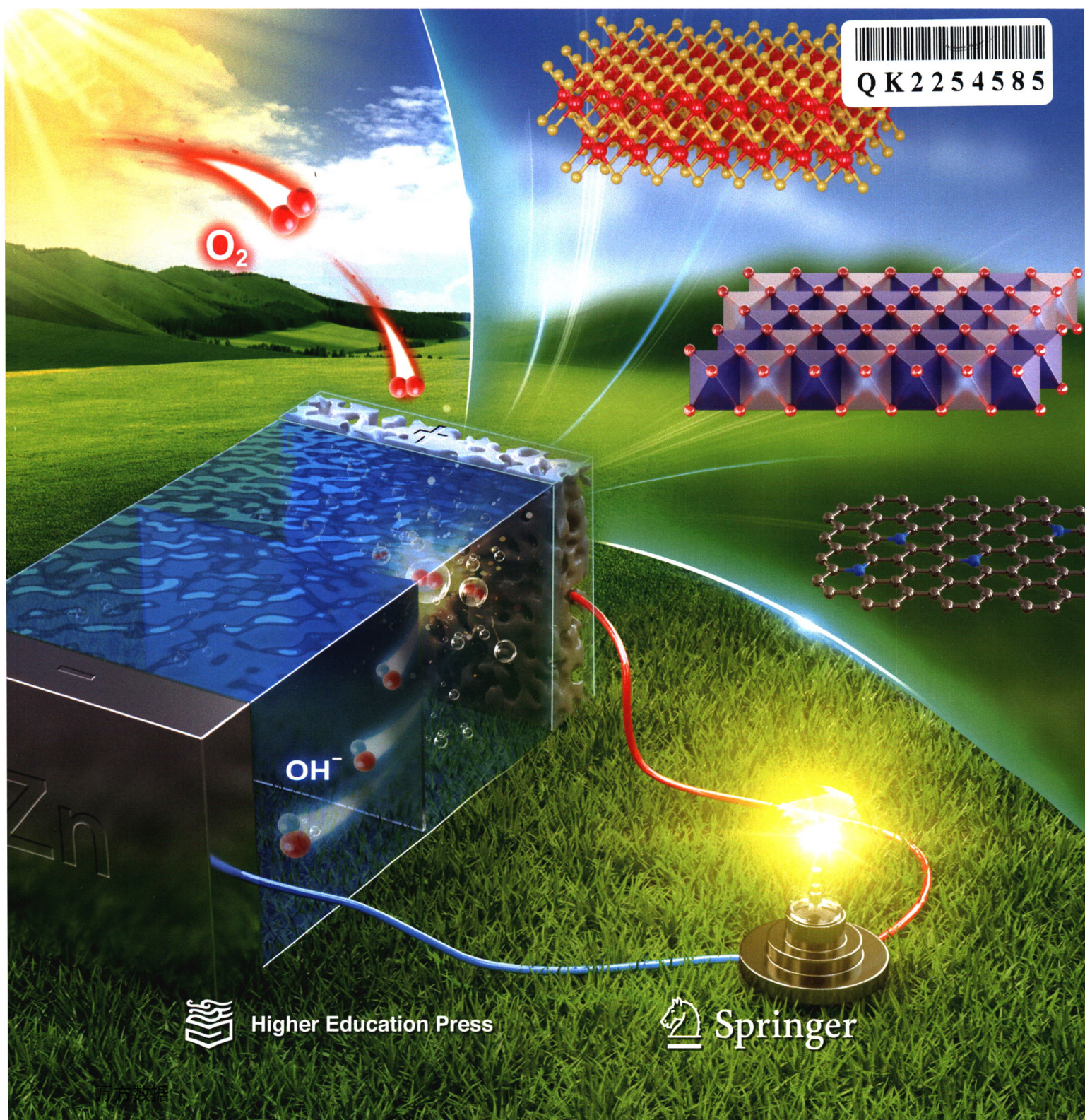


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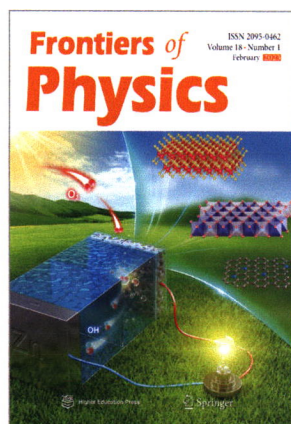
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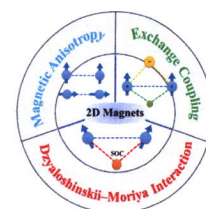
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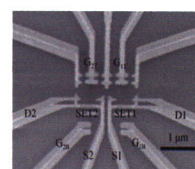
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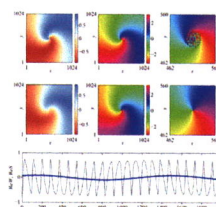
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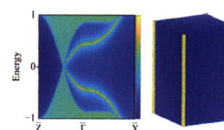
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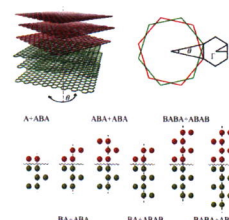
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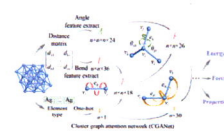
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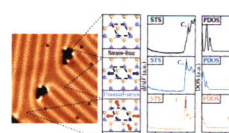
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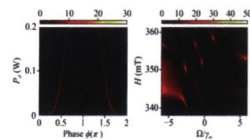
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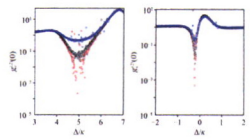
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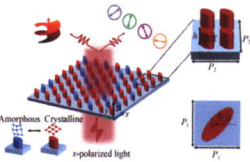
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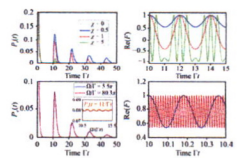
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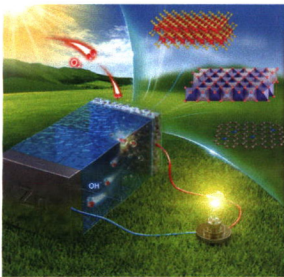
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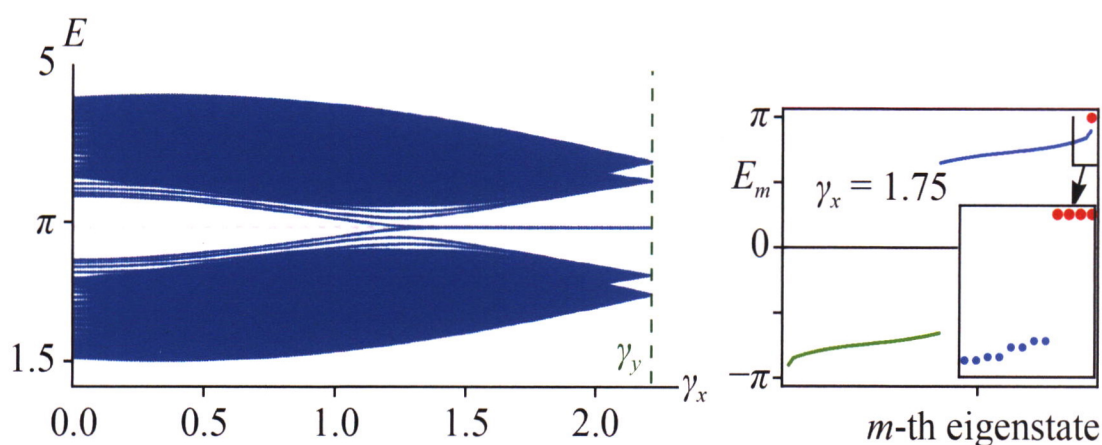


Cover

Oxygen electrocatalysts are of great importance for the air electrode in zinc–air batteries (ZABs). Owing to large surface area, high electrical conductivity and ease of modification, two-dimensional (2D) materials have been widely studied as oxygen electrocatalysts for the rechargeable ZABs. The elaborately modified 2D materials-based electrocatalysts, usually exhibit excellent performance toward the oxygen reduction reaction (ORR) and oxygen evolution reaction (OER), which have attracted extensive interests of worldwide researchers. Given the rapid development of bifunctional electrocatalysts toward ORR and OER, the latest progress of non-noble electrocatalysts based on layered double hydroxides (LDHs), graphene, and MXenes are intensively reviewed. The discussion ranges from fundamental structure, synthesis, electrocatalytic performance of these catalysts, as well as their applications in the rechargeable ZABs. Finally, the challenges and outlook are provided for further advancing the commercialization of rechargeable ZABs. For more details, please refer to the article entitled “Bifunctional oxygen electrocatalysts for rechargeable zinc–air battery based on MXene and beyond” by Jing Zhang, et al., *Front. Phys.* 18(1), 13603 (2023). [Photo credit: Ruguang Ma at Suzhou University of Science and Technology.]

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The authors review the recent development in constructing higher-order topological band insulators under strong periodic drivings. In particular, they focus on various approaches in formulating the anomalous Floquet topological invariants beyond (quasi-)static band topology, and compare their different physical consequences. See: Biao Huang, Topological invariants for anomalous Floquet higher-order topological insulators, *Front. Phys.* 18(1), 13601 (2023)

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