OAK RIDGE NATIONAL LABORATORY
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Gradient Porous Electrode Architectures for Rechargeable Metal-Air Batteries

Disclosure Number

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Technology Summary

This invention reports a novel synthetic approach towards the design of air electrodes for metal-air batteries. Specifically, we employ a hybrid approach that incorporates a structural and a compositional gradient along the spatial dimension or thickness of the air cathode. The proposed cathode is based on electronically conducting macroporous inverse structures with engineered porosity to facilitate/optimize the transport of dissolved oxygen species in the electrolyte. This improves the capacity utilization and rechargeablity of the metal-air batteries

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