

## **One-way Extraordinary Sound Transmission**

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The study on unidirectional wave acoustic wave propagation has drawn considerable attentions. Among all the passive solutions, the essential issue of insufficient transmission efficiency in forward direction still requires improvement. In this talk, we introduce a new material for one-way acoustic transmission. Through a systematical design of combining sound inter-mode transition, selective mode filtering, and cavity resonance, the near perfect forward acoustic wave transmission and broadband high contrast ratio have been demonstrated in experiments. The material is simple and flexible for applications in acoustic imaging, sensing and noise control.