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Co_4N/nitrogen-doped graphene: a non-noble metal oxygen reduction electrocatalyst for alkaline fuel cells

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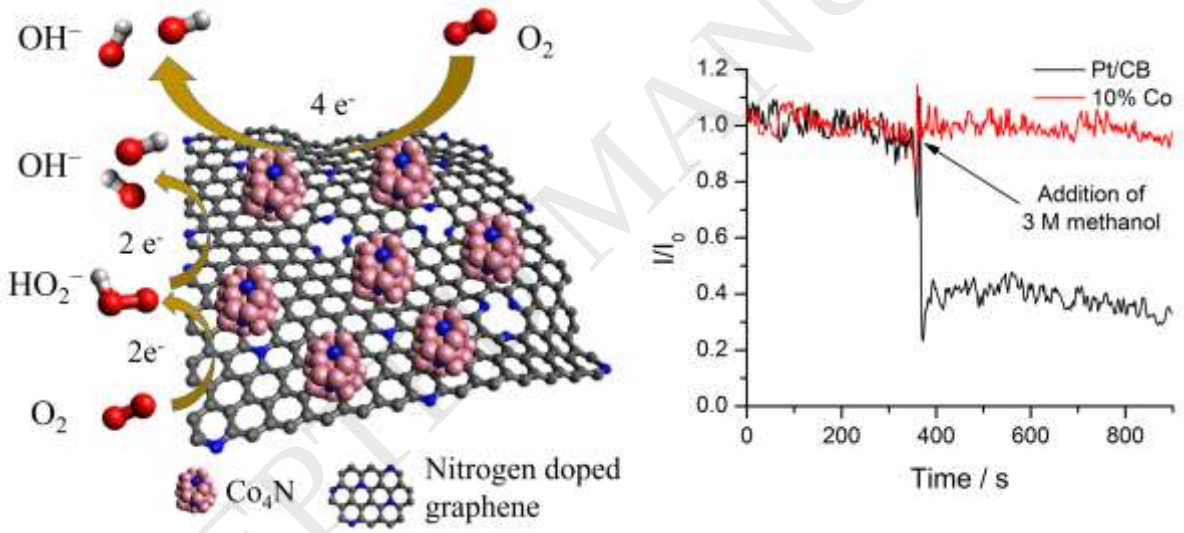
Grapgical abstract



Highlights

- The composites were formed via annealing in ammonia atmosphere.
- Cobalt nitride particle size increased with increasing cobalt content.
- Oxygen reduction reaction activity was studied in alkaline media.
- The ORR activity of the composites was comparable to that of Pt/CB catalysts and literature data.
- The composites showed improved methanol tolerance compared to Pt/CB catalysts.