



Environment friendly hydrothermal synthesis of carbon-Co<sub>3</sub>O<sub>4</sub> nanorods composite as an efficient catalyst for oxygen evolution reaction

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### Highlights

- Simple and scalable method was developed for carbon-Co<sub>3</sub>O<sub>4</sub> nanorods synthesis.
- The elemental mapping of C-Co<sub>3</sub>O<sub>4</sub>-NRs demonstrate that the carbon distribution on the surface of nanorod is uniform.
- C-Co<sub>3</sub>O<sub>4</sub>-NRs gave lowest onset potential (0.35 V) and Tafel slope (53 mV/decade).
- The C-Co<sub>3</sub>O<sub>4</sub>-NRs catalyst displays better stability in alkaline solution.

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