Supporting information for:

Engineering surface and morphology of WO₃ via La doping for electrochemical oxygen reduction

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Figure S1. Trend in (a) FWHM, (b) relative intensities, and (c) peak position of (002), (020) and (200) as a function of increasing La percentage.



Figure S2. (a) N_2 adsorption-desorption isotherms of La/WO₃ (0, 5, 10, 20%), (b) Pore size distribution



Figure S3. Measured diameter of 100 particles.



Figure S4. EDS spectra of 10% La/WO₃ nanorod (as shown in inset) showing the presence of only La, W, and O. Cu and C peaks arise from the TEM grid.



Figure S5. (a) HRTEM exposing (021) plane on pure WO₃, (b) IR peaks of La/WO₃ - 0, 5, 10, 20%.



Figure S6. Cyclic voltammetry curves of pure WO₃ in nitrogen and oxygen atmosphere.







Figure S8. ORR activities of all catalysts at 0.2 mA/cm².