

Supplementary Material For:

Enhanced Oxygen Reduction with Ethanol-Tolerant Ni-Te Nanoparticles on Carbon Support Through Vapour-Solid Preparation

1 X-ray diffraction and Rietveld refinement

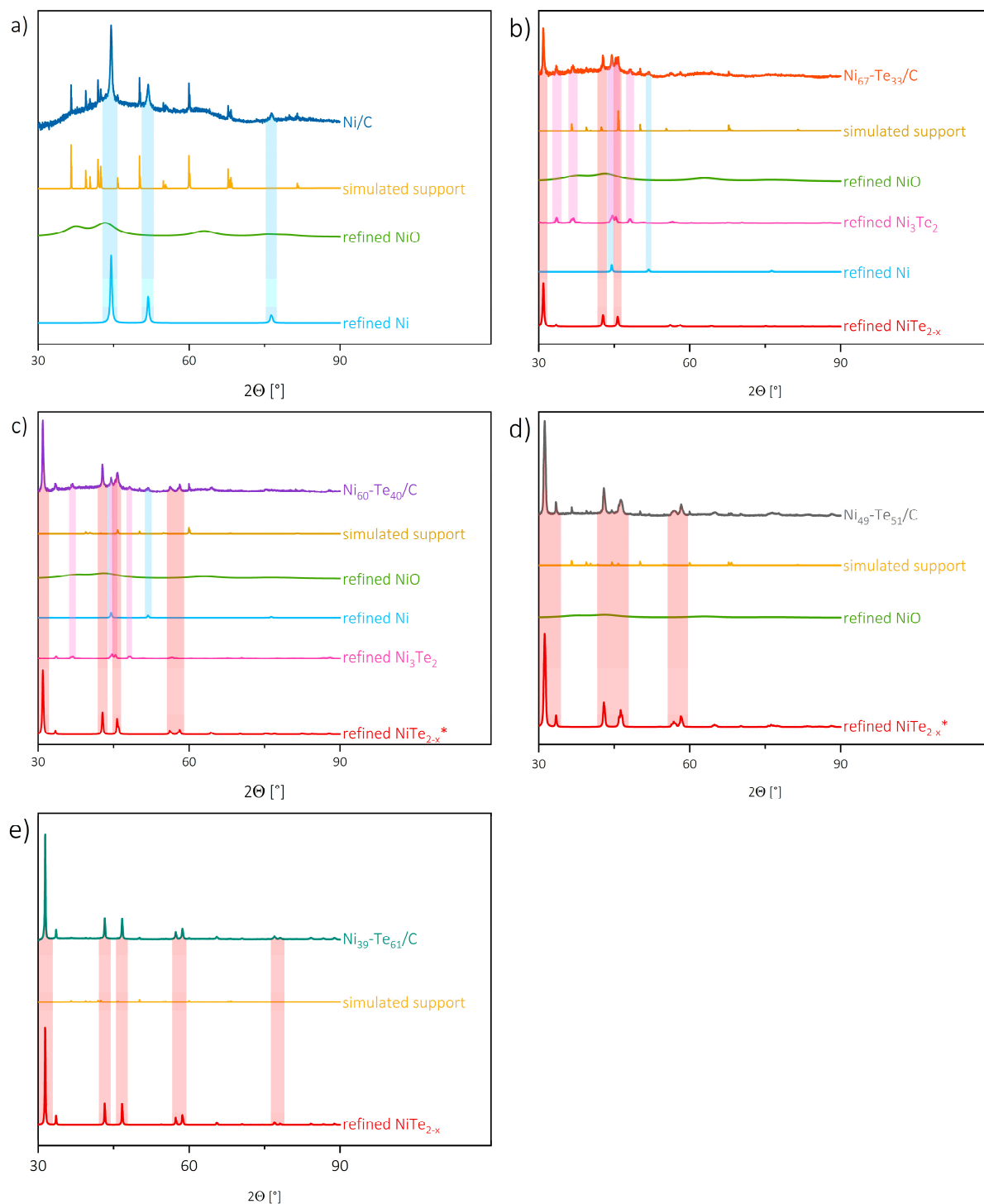


Figure S1. PXRD patterns and refined patterns of Ni-based catalyst materials: Ni/C (a), $\text{Ni}_{67}\text{Te}_{33}/\text{C}$ (b), $\text{Ni}_{60}\text{Te}_{40}/\text{C}$ (c), $\text{Ni}_{49}\text{Te}_{51}/\text{C}$ (d), and $\text{Ni}_{39}\text{Te}_{61}/\text{C}$ (e).

2 Cyclic voltammetry

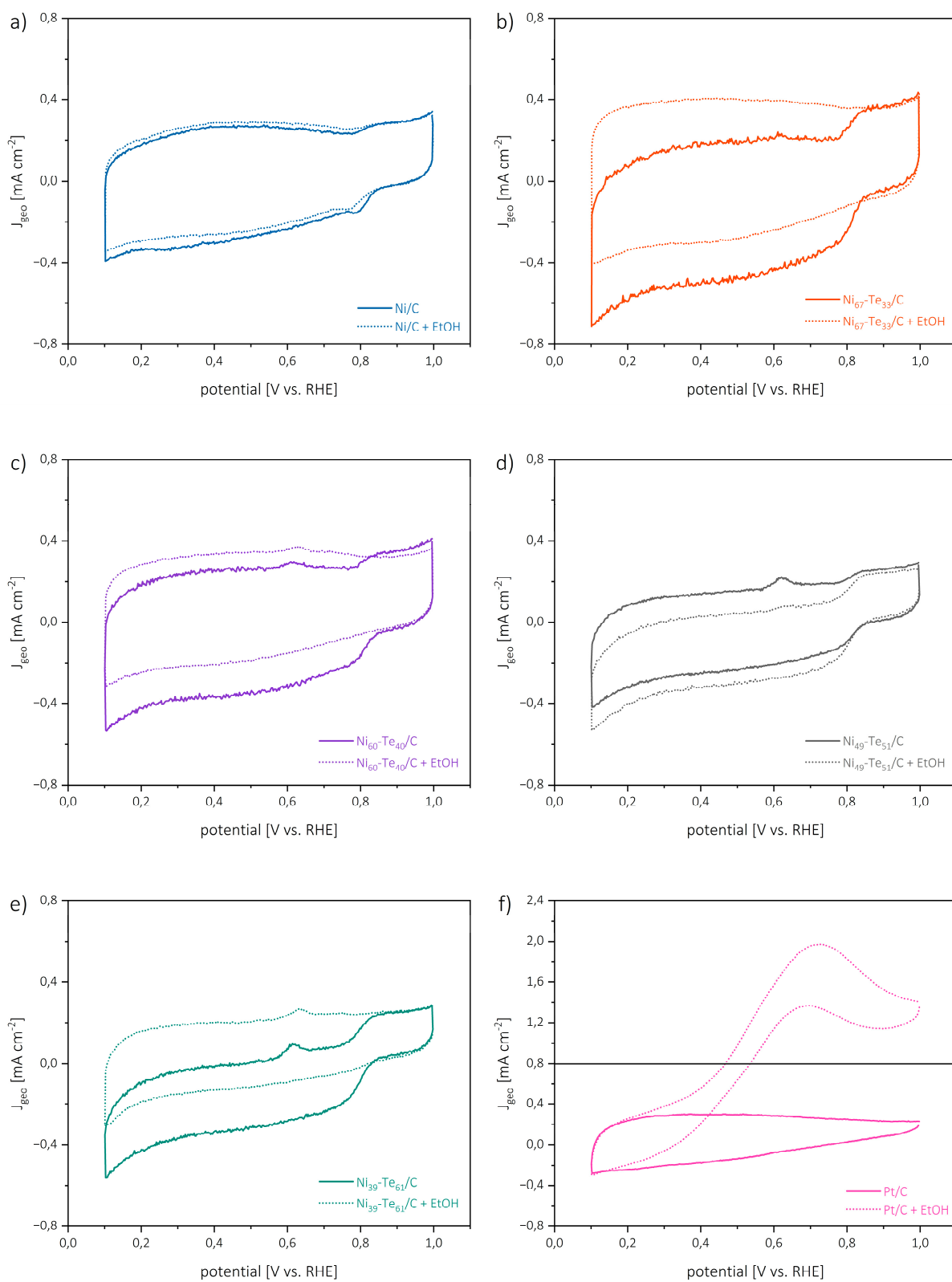


Figure S2. Cyclic voltammetry curves of various catalysts in 1 M KOH (full line) and in a mixture of 1 M KOH + 1 M ethanol (dotted lines) for materials: Ni/C (a), $\text{Ni}_{67}\text{Te}_{33}/\text{C}$ (b), $\text{Ni}_{60}\text{Te}_{40}/\text{C}$ (c), $\text{Ni}_{49}\text{Te}_{51}/\text{C}$ (d), $\text{Ni}_{39}\text{Te}_{61}/\text{C}$ (e), and Pt/C (f).

3 Linear sweep voltammetry

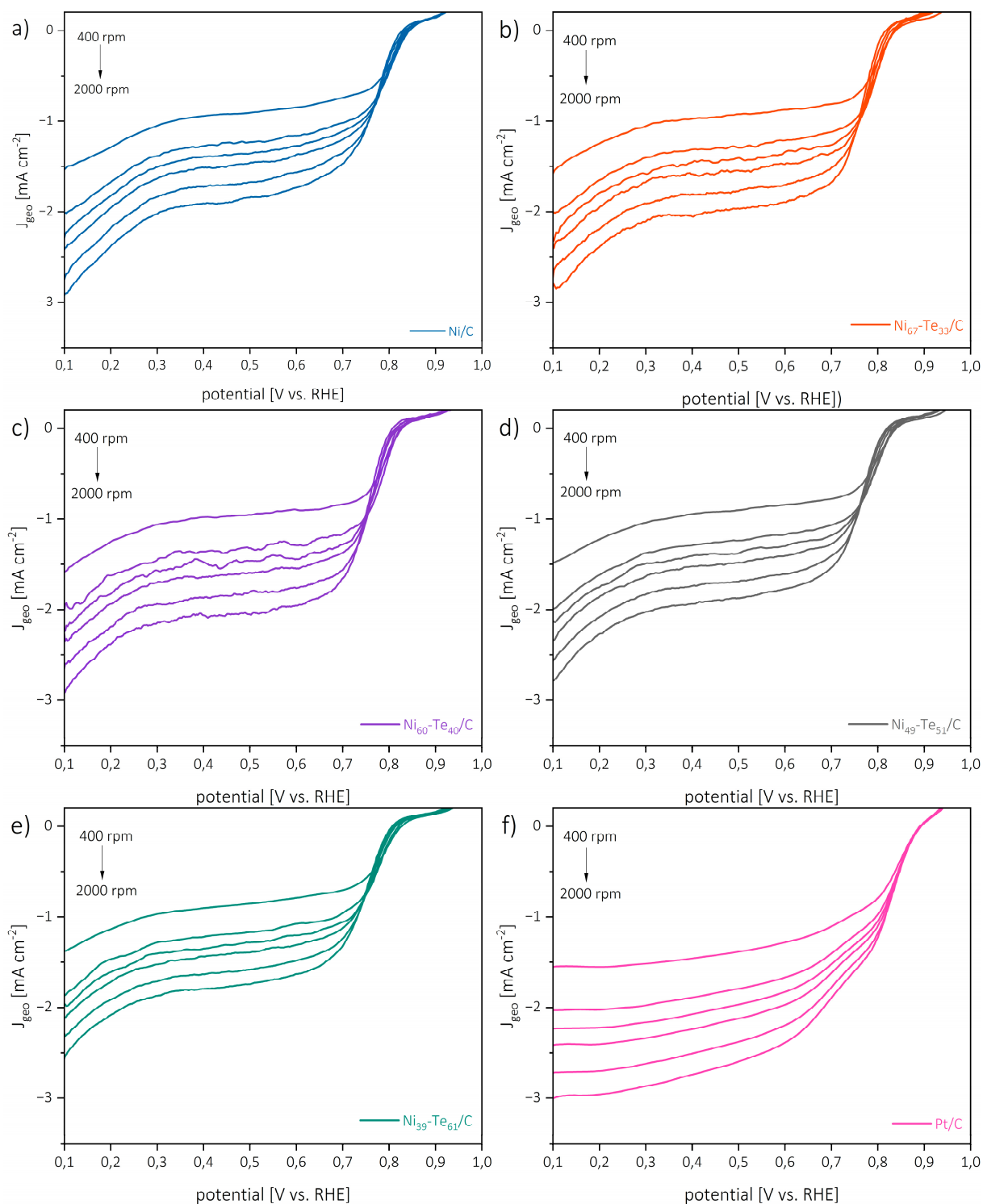


Figure S3. Linear sweep voltammetry curves at different rotation rates (400, 800, 1000, 1200, 1600, 2000 rpm) in 1 M KOH electrolyte solution of materials: Ni/C (a), $\text{Ni}_{67}\text{Te}_{33}/\text{C}$ (b), $\text{Ni}_{60}\text{Te}_{40}/\text{C}$ (c), $\text{Ni}_{49}\text{Te}_{51}/\text{C}$ (d), $\text{Ni}_{39}\text{Te}_{61}/\text{C}$ (e), and Pt/C (f).