**Supplementary information of a novel evaluation method of powder electrocatalyst for gas evolution reaction**

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S1 Synthesis method of LaNiO3

 LaNiO3 Powder catalyst was synthesized by the sol-gel method. La(NO3)3･6H2O (Wako Pure Chemical corp., 99.9%) was dried at 150oC for 2 hours and then mixed at 150oC for 2 hours with 100 ml 2-Methoxyethanol. (CH3COO)2Ni･4H2O (Junsei Chemical Co. Ltd., 98.0%) was dried at 200oC for 2 hours and then mixed at 150oC for 2 hours with 50 ml 2-methoxyethanol and 50 ml 2-Aminoethanol. Two precursors were mixed at 150oC for 2 hours. 10 ml mixed-solution was heated at 150oC for 24 hours and then 400oC for 1 hours in alumina crucible by muffle furnace. After clash in agate mortar for 10 min, the powder catalyst was heat-treated at 800oC for 12 hours and clashed for 10 min.

S2 Interpolation process after *iR* corrected

Figure S1(a) Before and (b) after interpolation process for *i*-*E* plots after *iR* corrected.