

– Supplementary Figures –

Electrochemical Molecular Conversion of α -Keto Acid to Amino Acid at a Low Overpotential Using a Nanoporous Gold Catalyst

Yasuhiro Mie *, Shizuka Katagai and Chitose Mikami

Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), 2-17-2-1, Tsukisamu-higashi, Toyohira, Sapporo 062-8517, Japan; s.katagai@aist.go.jp (S.K.); mikami-c@aist.go.jp (C.M.)

** Corresponding Author: Yasuhiro Mie*

Tel.: +81-11-857-8913; Fax: +81-11-857-8915;

Email: yasuihiro.mie@aist.go.jp

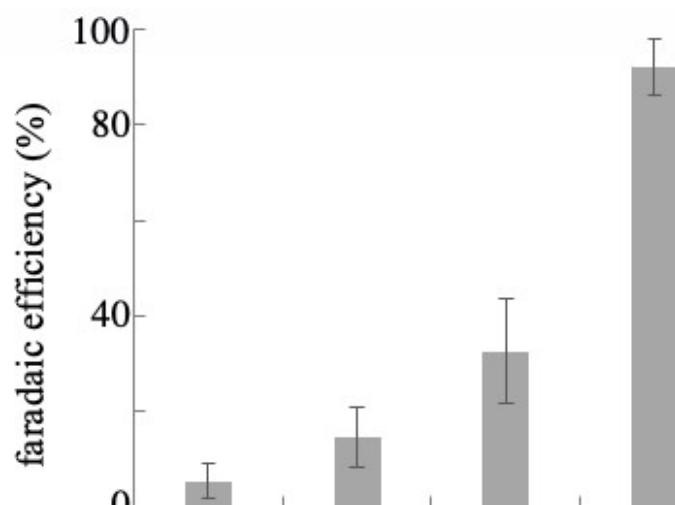


Figure. S1. FE for L-glutamic acid production obtained at the NPG electrode as a function of the α -ketoglutaric acid concentration. Electrolysis was conducted in the presence of NH_2OH for 30 min.

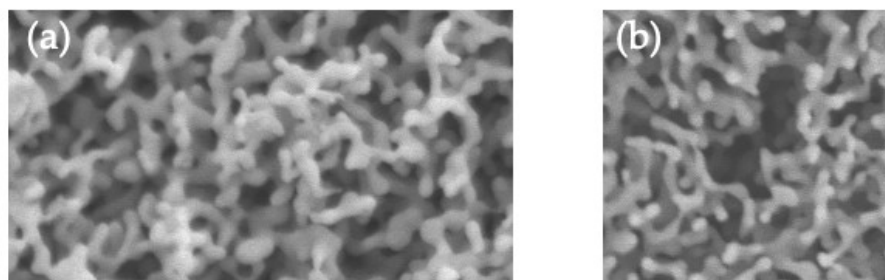


Figure. S2. Scanning electron microscopy images of the NPG electrode before (a) and after (b) the electrolysis experiments under the conditions described in Figure 5 in a $1.5 \times 1.0 \mu\text{m}$ region.