

Supporting Information

Nickel powder blended activated carbon cathodes for hydrogen production in microbial electrolysis cells

Kyoung-Yeol Kim ^{a,b,*} and Bruce E. Logan ^b

^a Department of Environmental and Sustainable Engineering, University at Albany, State University of New York, 1400 Washington Avenue, Albany, New York 12222, United States

^b Department of Civil and Environmental Engineering, The Pennsylvania State University, 231Q Sackett Building, University Park, Pennsylvania 16802, United States

*Corresponding author: e-mail: kkim28@albany.edu; phone: +1-518-437-4971; fax: +1-518-437-4949

Table S1. Activated carbon (AC) and Ni powder loadings for each tested electrode.

Tested electrodes	AC loading	Ni powder loading
AC-pNi4.8	186 mg (28.6 mg/cm ² loading)	31 mg (4.8 mg/cm ² loading)
AC-pNi19	186 mg	124 mg (19.2 mg/cm ² loading)
AC-pNi46	100 mg (15.4 mg/cm ² loading)	300 mg (46 mg/cm ² loading)
pNi77	0 mg	500 mg (77 mg/cm ² loading)

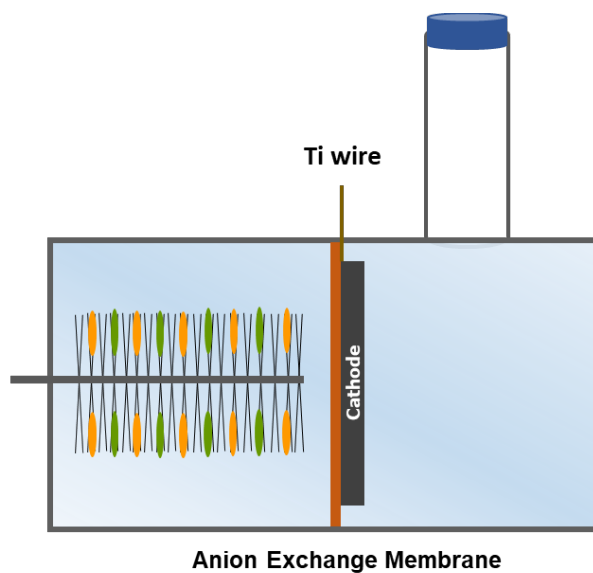


Figure S1. Configuration of a microbial electrolysis cell (MEC) reactor used in this study.

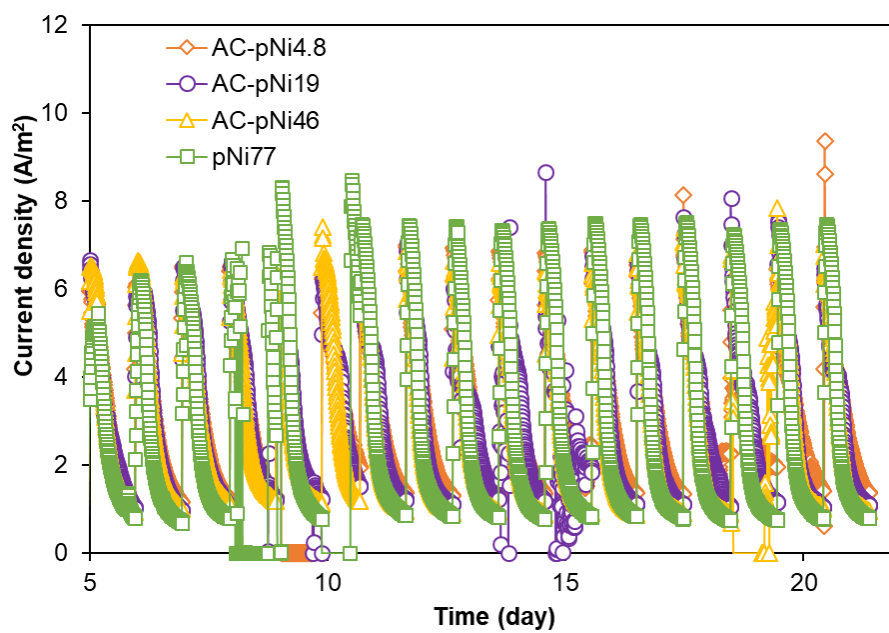


Figure S2. Current generation of MECs with tested electrodes over 22 days.

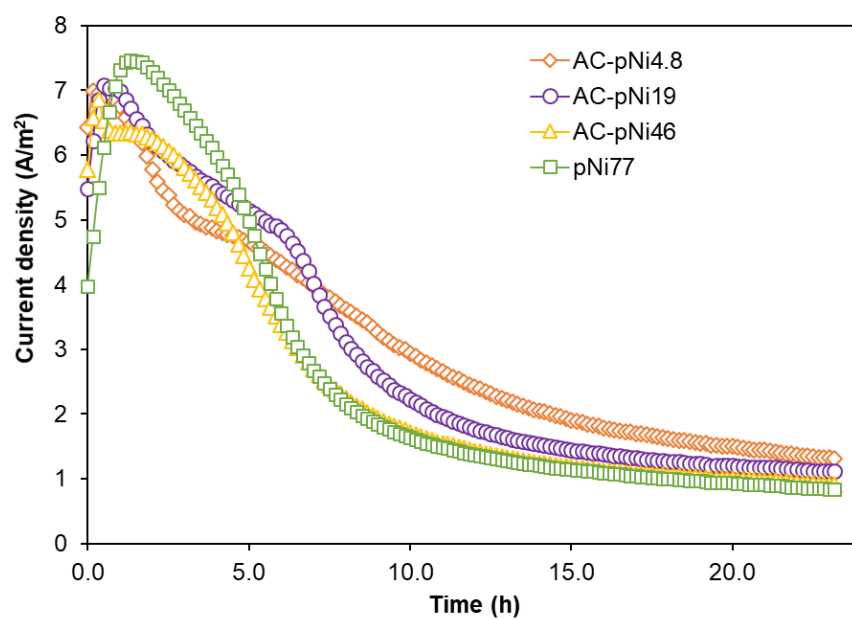


Figure S3. Current generation of MECs with tested electrodes in a single cycle.

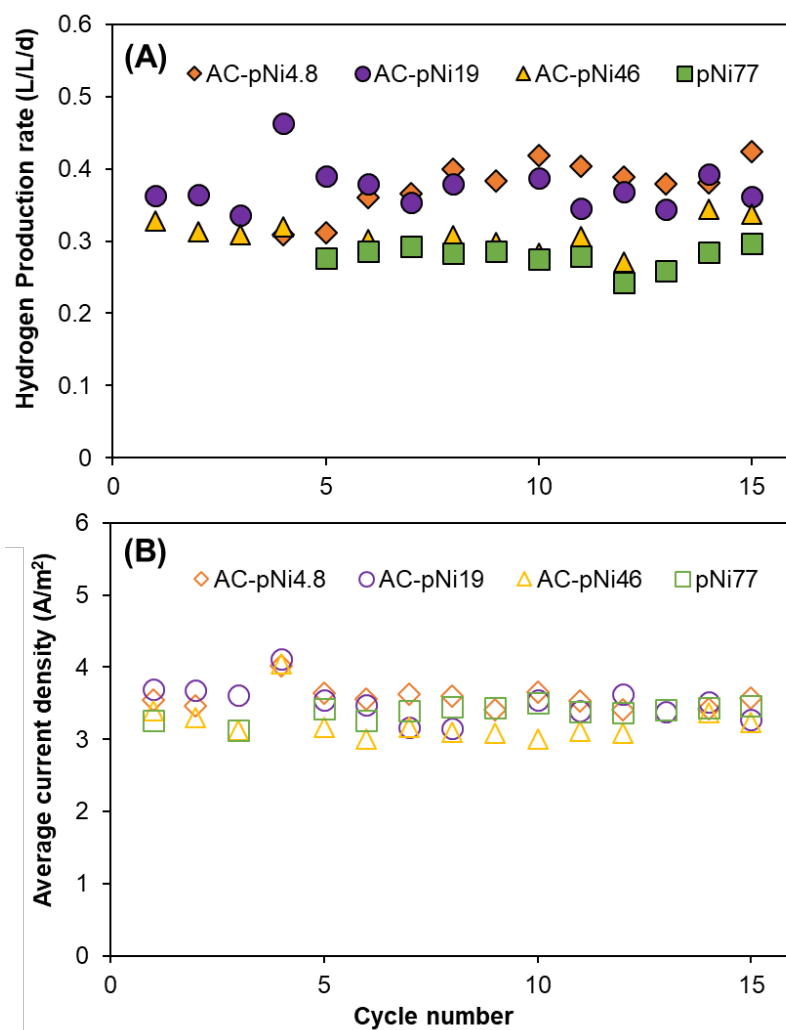


Figure S4. (A) Hydrogen production rates and (B) average current density of MECs with tested electrodes over 15 cycles.