

Synchrotron X-Ray Based Investigation of Fe Environment in Porous Anode of *Shewanella oneidensis* Microbial Fuel Cell

Authors : Sunil Dehipawala, Gayathrie Amarasuriya, N. Gadura, G. Tremberger Jr, D.Lieberman, Harry Gafney, Todd Holden, T. Cheung

Abstract : The iron environment in Fe-doped Vycor Anode was investigated with EXAFS using Brookhaven Synchrotron Light Source. The iron-reducing *Shewanella oneidensis* culture was grown in a microbial fuel cell under anaerobic respiration. The Fe bond length was found to decrease and correlate with the amount of biofilm growth on the Fe-doped Vycor Anode. The data suggests that Fe-doped Vycor Anode would be a good substrate to study the *Shewanella oneidensis* nanowire structure using EXAFS.

Keywords : EXAFS, fourier transform, *Shewanella oneidensis*, microbial fuel cell

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