

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Substrate incorporation of each single cell. In total, 6986 cells were analyzed. Zero means no incorporation detected.

File Name: Supplementary Data 2

Description: OTUs and its phylogenetic classification table for the microbial cells separated and sorted from incubated sediments. The samples shown as incubation time zero are the sediment samples before incubation was initiated.