

Fig. S1. Screening of N₂O emitters using a culture-based N₂O emission assay

N₂O emission potentials of 64 colonies were also examined using a culture-based N₂O emission assay for mainly four distinguishable bacteria with 8 replicate. Every eight similar colonies were collected for N₂O assay from the master plate as bacteria A, B, C, D, E, F, G and I. (note: data of B, D, F, and I did not show because of their very low N₂O emission). Controls 1 and 2 are without inoculants.

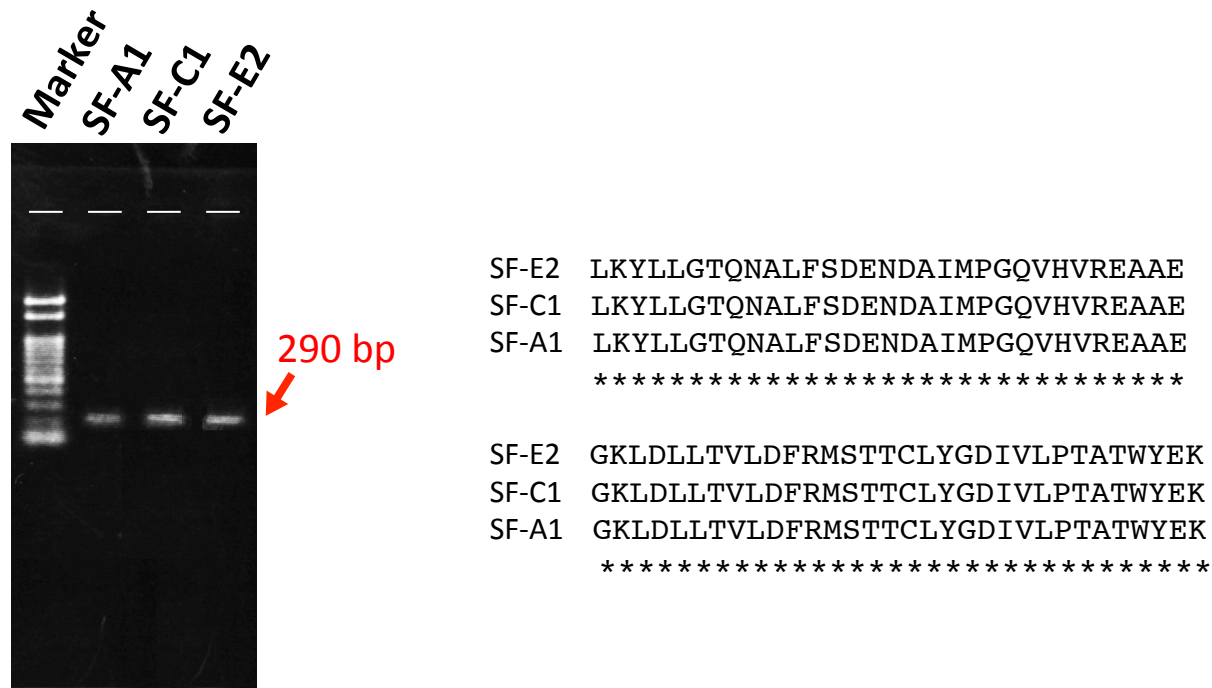


Fig. S2. PCR assay for the detection of *narG* gene from *Burkholderia* N₂O emitters

Agarose gel profile for the detection of *narG* gene by the PCR assays. Amino acid sequences of NAR α -subunit protein translated from the nucleotide sequences amplified from *narG* are also shown here. PCR assay for detection of *narG* gene by using the special primer. Translated protein sequence by using the sequence data were listed. As a positive control. As a molecular size marker, 2-kbp DNA ladder was used.

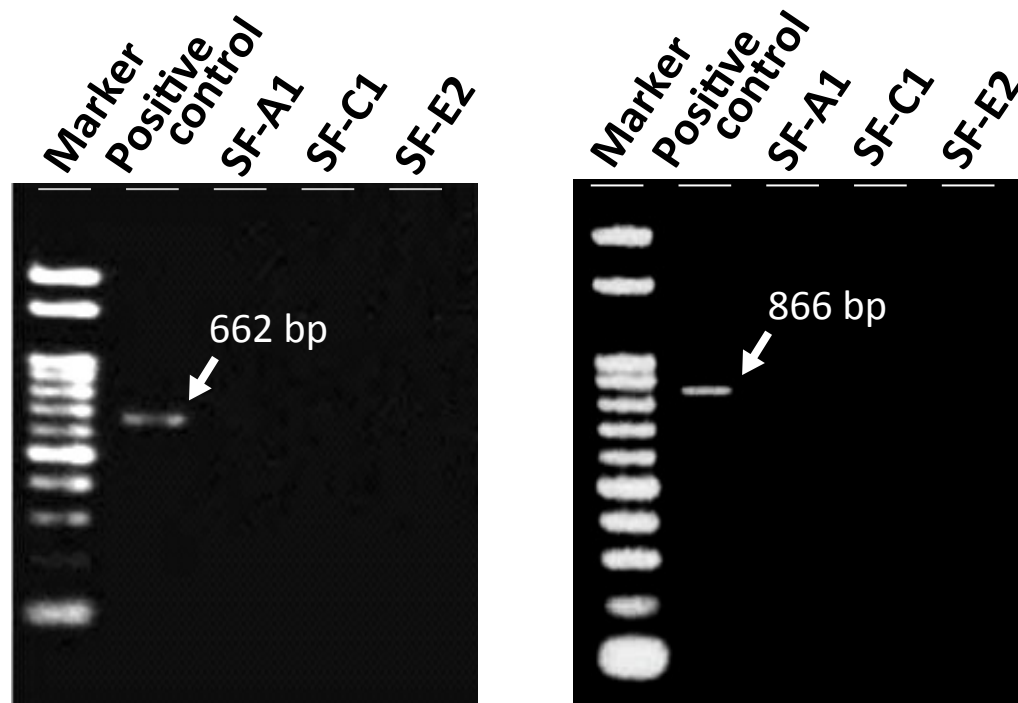


Fig. S3. PCR assay for the detection of *nosZ* gene from *Burkholderia* N₂O emitters

PCR assay was performed to detect *nosZ* gene using two pairs of *nosZ* primers (*1111F* and *1773R*; *661F* and *1527R*). A *nosZ*-possessing *Pseudomonas* sp. 05CF15-5C (accession no. LC007966) was used for the positive control. As a molecular size marker, 2-kbp DNA ladder was used. The PCR assays for *nosZ* gene were negative in all of three *Burkholderia* N₂O emitters.