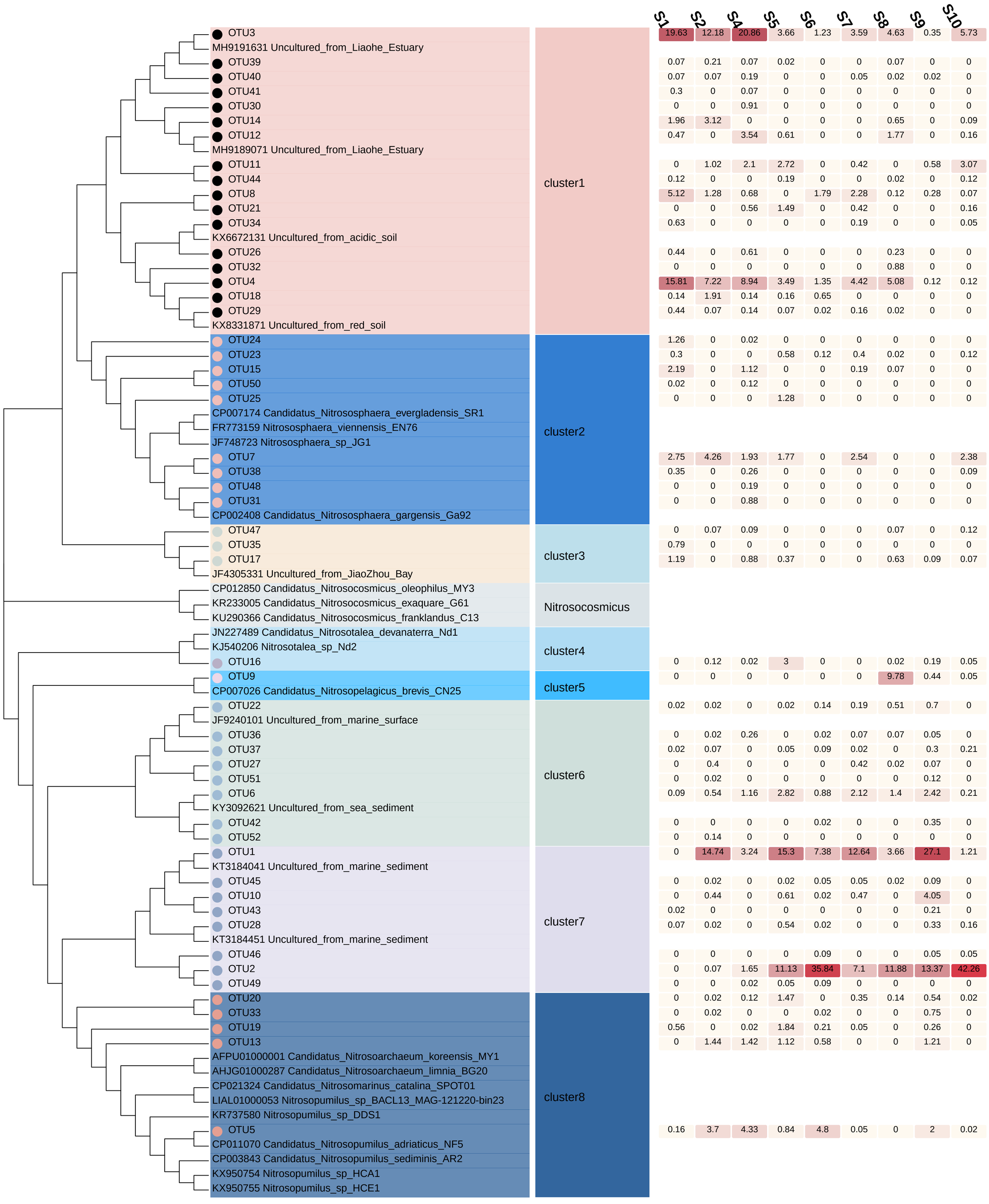
S1 S2 S4 S5 S6 S7 S8 S9 S10
OTU3 19.63 12.18 20.86 3.66 1.23 3.59 4.63 0.35 5.73
MH9191631 Uncultured_from_Liaohe_Estuary
OTU39 0.07 0.21 0.07 0.02 0 0 0.07 0 0
OTU40 0.07 0.07 0.19 0 0 0.05 0.02 0.02 0
OTU41 0.3 0 0.07 0 0 0 0 0 0
OTU30 0 0 0.91 0 0 0 0 0 0
OTU14 1.96 3.12 0 0 0 0 0.65 0 0.09
OTU12 0.47 0 3.54 0.61 0 0 1.77 0 0.16
MH9189071 Uncultured_from_Liaohe_Estuary
OTU11 0 1.02 2.1 2.72 0 0.42 0 0.58 3.07
OTU44 0.12 0 0 0.19 0 0 0.02 0 0.12
OTU8 5.12 1.28 0.68 0 1.79 2.28 0.12 0.28 0.07
OTU21 0 0 0.56 1.49 0 0.42 0 0 0.16
OTU34 0.63 0 0 0 0 0.19 0 0 0.05
KX6672131 Uncultured_from_acidic_soil
OTU26 0.44 0 0.61 0 0 0 0.23 0 0
OTU32 0 0 0 0 0 0 0.88 0 0
OTU4 15.81 7.22 8.94 3.49 1.35 4.42 5.08 0.12 0.12
OTU18 0.14 1.91 0.14 0.16 0.65 0 0 0 0
OTU29 0.44 0.07 0.14 0.07 0.02 0.16 0.02 0 0
KX8331871 Uncultured_from_red_soil
cluster1
OTU24 1.26 0 0.02 0 0 0 0 0 0
OTU23 0.3 0 0 0.58 0.12 0.4 0.02 0 0.12
OTU15 2.19 0 1.12 0 0 0.19 0.07 0 0
OTU50 0.02 0 0.12 0 0 0 0 0 0
OTU25 0 0 0 1.28 0 0 0 0 0
CP007174 Candidatus_Nitrososphaera_evergladensis_SR1
FR773159 Nitrososphaera_viennensis_EN76
JF748723 Nitrososphaera_sp_JG1
OTU7 2.75 4.26 1.93 1.77 0 2.54 0 0 2.38
OTU38 0.35 0 0.26 0 0 0 0 0 0.09
OTU48 0 0 0.19 0 0 0 0 0 0
OTU31 0 0 0.88 0 0 0 0 0 0
CP002408 Candidatus_Nitrososphaera_gargensis_Ga92
cluster2
OTU47 0 0.07 0.09 0 0 0 0.07 0 0.12
OTU35 0.79 0 0 0 0 0 0 0 0
OTU17 1.19 0 0.88 0.37 0 0 0.63 0.09 0.07
JF4305331 Uncultured_from_JiaoZhou_Bay
cluster3
CP012850 Candidatus_Nitrosocosmicus_oleophilus_MY3
KR233005 Candidatus_Nitrosocosmicus_exaquare_G61
KU290366 Candidatus_Nitrosocosmicus_franklandus_C13
Nitrosocosmicus
JN227489 Candidatus_Nitrosotalea_devanaterra_Nd1
KJ540206 Nitrosotalea_sp_Nd2
OTU16 0 0.12 0.02 3 0 0 0.02 0.19 0.05
cluster4
OTU9 0 0 0 0 0 0 9.78 0.44 0.05
CP007026 Candidatus_Nitrosopelagicus_brevis_CN25
cluster5
OTU22 0.02 0.02 0 0.02 0.14 0.19 0.51 0.7 0
JF9240101 Uncultured_from_marine_surface
OTU36 0 0.02 0.26 0 0.02 0.07 0.07 0.05 0
OTU37 0.02 0.07 0 0.05 0.09 0.02 0 0.3 0.21
OTU27 0 0.4 0 0 0 0.42 0.02 0.07 0
OTU51 0 0.02 0 0 0 0 0 0.12 0
OTU6 0.09 0.54 1.16 2.82 0.88 2.12 1.4 2.42 0.21
KY3092621 Uncultured_from_sea_sediment
OTU42 0 0 0 0 0.02 0 0 0.35 0
OTU52 0 0.14 0 0 0 0 0 0 0
cluster6
OTU1 0 14.74 3.24 15.3 7.38 12.64 3.66 27.1 1.21
KT3184041 Uncultured_from_marine_sediment
OTU45 0 0.02 0 0.02 0.05 0.05 0.02 0.09 0
OTU10 0 0.44 0 0.61 0.02 0.47 0 4.05 0
OTU43 0.02 0 0 0 0 0 0 0.21 0
OTU28 0.07 0.02 0 0.54 0.02 0 0 0.33 0.16
KT3184451 Uncultured_from_marine_sediment
OTU46 0 0 0 0 0.09 0 0 0.05 0.05
OTU2 0 0.07 1.65 11.13 35.84 7.1 11.88 13.37 42.26
OTU49 0 0 0.02 0.05 0.09 0 0 0 0
cluster7
OTU20 0 0.02 0.12 1.47 0 0.35 0.14 0.54 0.02
OTU33 0 0.02 0 0 0.02 0 0 0.75 0
OTU19 0.56 0 0.02 1.84 0.21 0.05 0 0.26 0
OTU13 0 1.44 1.42 1.12 0.58 0 0 1.21 0
AFPU01000001 Candidatus_Nitrosoarchaeum_koreensis_MY1
AHJG01000287 Candidatus_Nitrosoarchaeum_limnia_BG20
CP021324 Candidatus_Nitrosomarinus_catalina_SPOT01
LIAL01000053 Nitrosopumilus_sp_BACL13_MAG-121220-bin23
KR737580 Nitrosopumilus_sp_DDS1
OTU5 0.16 3.7 4.33 0.84 4.8 0.05 0 2 0.02
CP011070 Candidatus_Nitrosopumilus_adriaticus_NF5
CP003843 Candidatus_Nitrosopumilus_sediminis_AR2
KX950754 Nitrosopumilus_sp_HCA1
KX950755 Nitrosopumilus_sp_HCE1
cluster8