

*Supplement of:*

Oxidative capacity and radical chemistry in a semi-arid and  
petrochemical-industrialized city, Northwest China

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Table S1. Concentration of measured VOCs species at two sampling sites in the summertime

| Species                | Concentration<br>(ppbv) |       | Species                | Concentration<br>(ppbv) |      |
|------------------------|-------------------------|-------|------------------------|-------------------------|------|
|                        | S1                      | S2    |                        | S1                      | S2   |
| Propane                | 1.64                    | 10.15 | Propylene              | 2.37                    | 5.36 |
| n-Butane               | 0.30                    | 3.97  | 1-Butene               | 1.15                    | 2.33 |
| i-Butane               | 1.85                    | 5.11  | cis-2-Butene           | 1.11                    | 0.67 |
| n-Pentane              | 0.14                    | 3.24  | trans-2-Butene         | 0.46                    | 2.41 |
| Cyclopentane           | 0.90                    | 4.10  | 1-Pentene              | 0.51                    | 0.75 |
| i-Pentane              | 0.76                    | 4.87  | cis-2-Pentene          | 0.42                    | 0.53 |
| n-Hexane               | 0.06                    | 1.78  | trans-2-Pentene        | 0.19                    | 0.96 |
| 2,2-Dimethylbutane     | 0.19                    | 0.50  | Isoprene               | 0.07                    | 1.06 |
| 2,3-Dimethylbutane     | 0.33                    | 0.14  | 1-Hexene               | 0.09                    | 1.14 |
| 2-Methylpentane        | 0.35                    | 0.44  | Benzene                | 0.18                    | 3.64 |
| 3-Methylpentane        | 0.48                    | 0.57  | Toluene                | 0.73                    | 3.25 |
| Methylcyclopentane     | 0.19                    | 0.25  | Styrene                | 0.06                    | 2.79 |
| Cyclohexane            | 1.12                    | 2.78  | Ethylbenzene           | 0.11                    | 2.60 |
| n-Heptane              | 0.07                    | 2.40  | m-Xylene               | 0.20                    | 2.03 |
| 2,3-Dimethylpentane    | 0.21                    | 2.31  | p-Xylene               | 0.18                    | 2.05 |
| 2,4-Dimethylpentane    | 0.12                    | 0.37  | o-Xylene               | 0.19                    | 2.71 |
| 2-Methylhexane         | 0.22                    |       | i-Propylbenzene        | 0.09                    | 2.22 |
| 3-Methylhexane         | 0.28                    | 1.39  | n-Propylbenzene        | 0.54                    | 0.40 |
| Methylcyclopentane     | 0.21                    | 2.57  | 1,2,3-Trimethylbenzene | 0.03                    | 1.66 |
| n-Octane               | 0.53                    | 2.32  | 1,2,4-Trimethylbenzene | 0.08                    | 0.76 |
| 2-Methylheptane        | 0.73                    | 1.96  | 1,3,5-Trimethylbenzene | 0.13                    | 1.74 |
| 3-Methylheptane        | 0.45                    | 1.83  | m-Ethyltoluene         | 0.34                    | 1.47 |
| 2,2,4-Trimethylpentane | 0.31                    | 2.08  | p-Ethyltoluene         | 0.14                    | 2.64 |
| 2,3,4-Trimethylpentane | 0.25                    | 2.23  | o-Ethyltoluene         | 0.12                    | 0.59 |
| n-Nonane               | 0.10                    | 1.74  | m-Diethylbenzene       | 0.02                    | 1.29 |
| n-Decane               | 0.13                    | 1.87  | p-Diethylbenzen        | 0.03                    | 1.52 |

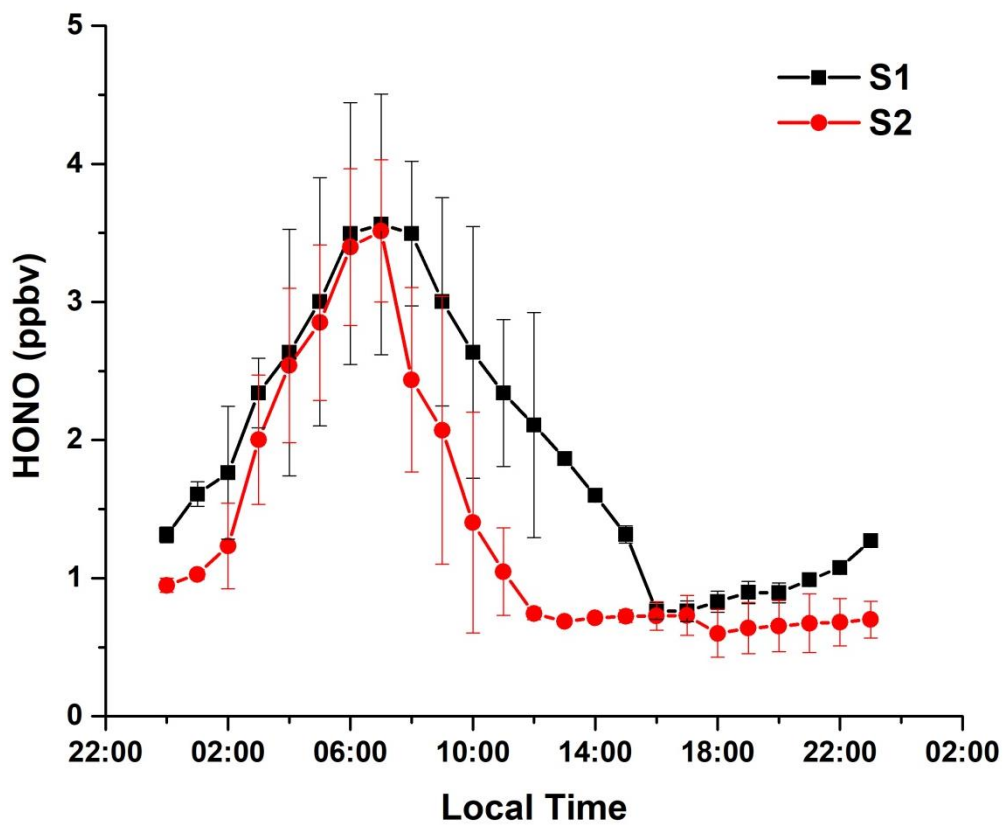


Figure S1. Average diurnal profiles of HONO at S1 and S2 site. Hourly standard deviations are also shown by error bars.