

## Supplementary Materials:



**Figure S1.** Different tree species managed by high trunk truncation in China. A: Pruned crown of *Platanus orientalis*. B: Pruned crown of *Poplar*. C: Pruned crown of Willow. D: *A. negundo* 3 years after high trunk truncation. E: *Platanus orientalis* after high trunk truncation in the summer of the current year. F: *S. babylonica* 7 years after high trunk truncation. G: *S. babylonica* were managed by high trunk truncation in the Mancheng. H: Pruned crown of *Sophora japonica*.

**Table S1. The bark thickness of different diameter of *S. babylonica***

| Sample \ Diameter | 0.5 cm | 1 cm | 2 cm | 3 cm | 4 cm |
|-------------------|--------|------|------|------|------|
| Sample            | 0.5 cm | 1 cm | 2 cm | 3 cm | 4 cm |
| 1                 | 0.71   | 0.86 | 1.43 | 2.43 | 3.13 |
| 2                 | 0.75   | 0.82 | 1.29 | 2.33 | 2.87 |
| 3                 | 0.64   | 0.89 | 1.35 | 2.16 | 3.07 |
| 4                 | 0.68   | 0.77 | 1.14 | 2.07 | 3.13 |
| 5                 | 0.57   | 1.06 | 1.52 | 2.24 | 3.23 |
| 6                 | 0.72   | 1    | 1.17 | 2.63 | 3.32 |
| 7                 | 0.58   | 0.75 | 1.33 | 2.38 | 3.38 |
| 8                 | 0.89   | 0.7  | 1.1  | 2.32 | 3.22 |
| 9                 | 0.6    | 0.96 | 1.26 | 2.64 | 3.29 |
| 10                | 0.73   | 0.86 | 1.28 | 2.7  | 2.97 |
| 11                | 0.68   | 0.89 | 1.12 | 2.23 | 3.15 |
| 12                | 0.58   | 0.76 | 1.11 | 2.68 | 2.99 |
| 13                | 0.57   | 0.75 | 1.25 | 2.31 | 2.84 |
| 14                | 0.64   | 0.78 | 1.55 | 2.36 | 2.98 |
| 15                | 0.55   | 1.03 | 1.31 | 2.41 | 3    |
| 16                | 0.51   | 0.98 | 1.21 | 2.37 | 3.11 |
| 17                | 0.57   | 0.95 | 1.48 | 2.31 | 3.24 |
| 18                | 0.61   | 0.79 | 1.46 | 2.33 | 3.04 |
| 19                | 0.6    | 0.88 | 1.24 | 2.35 | 3.1  |
| 20                | 0.69   | 0.85 | 1.32 | 2.11 | 2.96 |