Supplemental Table S2:

High-order orthogonal iterations process.

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| High-order orthogonal iterations |
| 1. Truncate the high-order singular value decomposition to get the initial values of :  ,  , .2. :2.1 Computed the high-order singular value decomposition of the matrix , and then selected the left singular vector corresponding to the  largest singular values, and used the standard orthogonal basis of this space as the column vector of .2.2 Computed the high-order singular value decomposition of the matrix , and then selected the left singular vector corresponding to the  largest singular values, and used the standard orthogonal basis of this space as the column vector of .2.3 Computed the high-order singular value decomposition of the matrix , and then selected the left singular vector corresponding to the  largest singular values, and used the standard orthogonal basis of this space as the column vector of .3. Reach the maximum number of iterations  cutoff.4.  ， ， 5. Calculate the core matrix . |