



Supplementary Materials

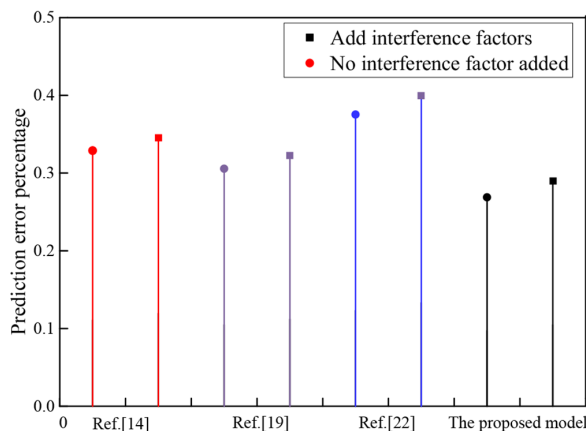


Fig. S1. Prediction error results of different models.

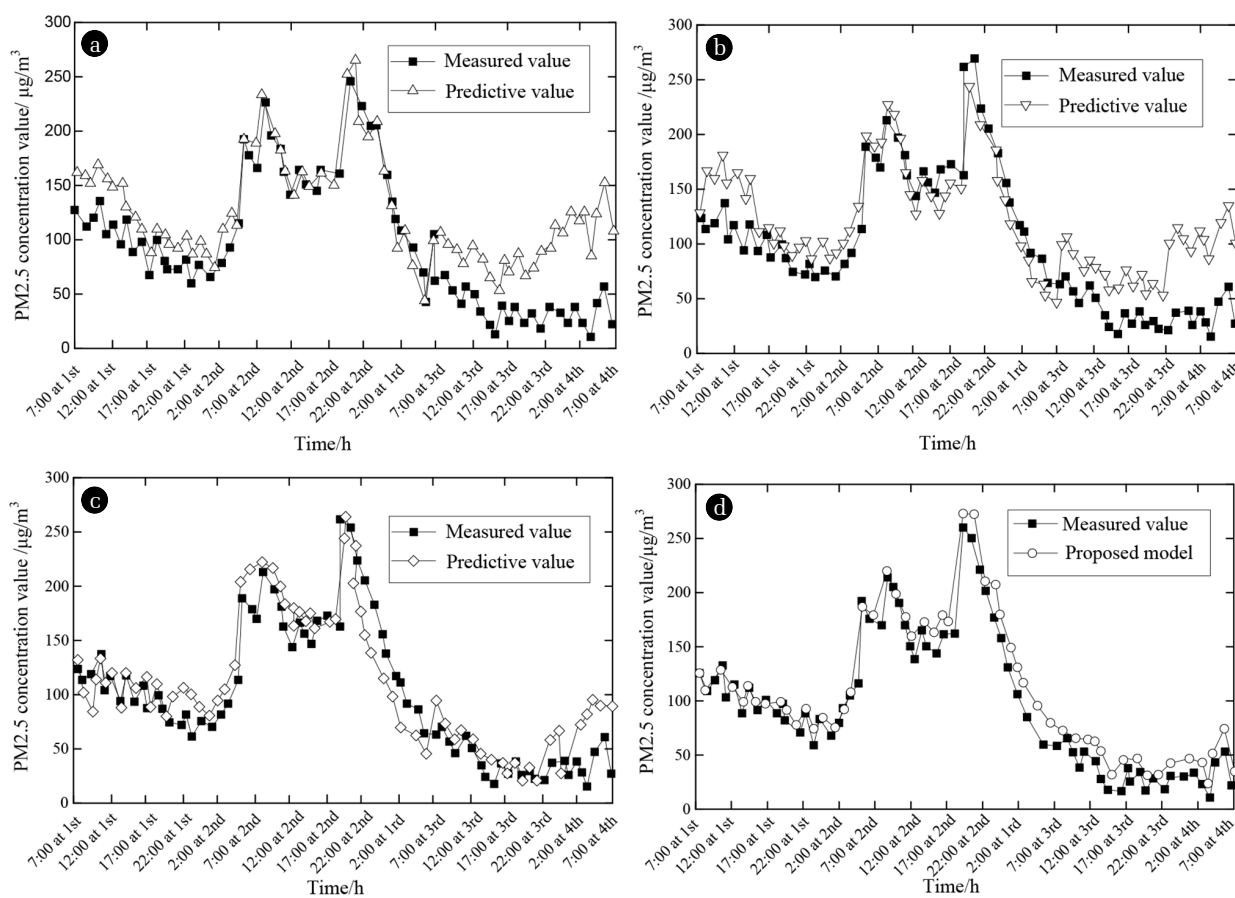


Fig. S2. Change of hourly concentration prediction curve of PM_{2.5} with time. (a) [17], (b) [19], (c) [22], (d) the proposed model.

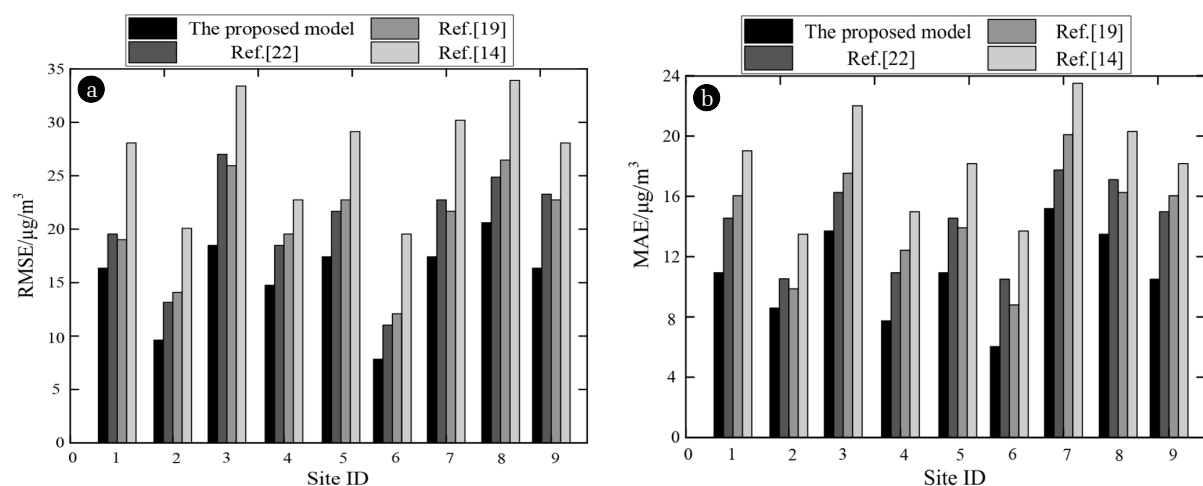


Fig. S3. Comparison of PM2.5 concentration prediction errors of different models at 9 sites. (a) RMSE comparison of PM2.5 concentration prediction. (b) MAE comparison of PM2.5 concentration prediction.

Table S1. Evaluation Results of Different Models on Data Sets with Interference Factors

| | RMSE ($\mu\text{g}/\text{m}^3$) | MAE ($\mu\text{g}/\text{m}^3$) | R ² |
|---------------------|-----------------------------------|----------------------------------|----------------|
| Zhang et al. [14] | 23.79 | 16.52 | 0.868 |
| Ayturan et al. [19] | 21.80 | 14.16 | 0.893 |
| Yang et al. [22] | 20.74 | 12.32 | 0.925 |
| The proposed model | 18.01 | 10.38 | 0.946 |

Table S2. Error Comparison of Prediction Results of Different Models

| | RMSE ($\mu\text{g}/\text{m}^3$) | MAE ($\mu\text{g}/\text{m}^3$) |
|--------------------|-----------------------------------|----------------------------------|
| [14] | 25.85 | 17.23 |
| [19] | 22.14 | 15.69 |
| [22] | 21.88 | 15.07 |
| The proposed model | 17.93 | 11.52 |