

Study on Optimal Control Strategy of PM2.5 in Wuhan, China

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Abstract : In this paper, we analyzed the correlation relationship among PM2.5 from other five Air Quality Indices (AQIs) based on the grey relational degree, and built a multivariate nonlinear regression equation model of PM2.5 and the five monitoring indexes. For the optimal control problem of PM2.5, we took the partial large Cauchy distribution of membership equation as satisfaction function. We established a nonlinear programming model with the goal of maximum performance to price ratio. And the optimal control scheme is given.

Keywords : grey relational degree, multiple linear regression, membership function, nonlinear programming

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