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Human Factors Analysis and Model of Accidents due to Driver Errors W.W. Lu, X.S. Jiang and J.B. Bi	1944
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Study on the Applicability of Grading Speed Limit Programs in the Highway Construction Operation Zone R.J. Yu, H. Zhu, R.G. Ma and G.H. Liang	1964
Research on Grading of Risk Factors in International EPC Projects from Contractors' Perspective J.Q. Li, Y. Yang, Y. Zheng and X.D. Li	1968
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Study on Delivery of Perishable Products in Retail Enterprise's Distribution Center F. Wei, Z.Y. Ge and Z.W. Zhang	1979
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Research on the Application of Ground Source Heat Pump Technology in Timber Structure Z.H. Bian, T.C. Wang, S.Y. Zhao and X.F. Guo	1998
Study on Multi-Vehicle Refrigerated Distribution of Agricultural Products with Soft Time Windows F.X. Li, Y.F. Yang, F. Wei and F. Wei	2002
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