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Equation for Predicting Shelf Life of an Apple A.A. Bhosale and K. Sundaram	1936
Welding Stress Analysis of Manhole of Liquid Ammonia Storage Tank Based on Gauss Heat Source J.Z. Zhang, H.G. Xiong and Y.M. Shuai	1942
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Research on Low Carbon City Development Y.X. Chen	1953
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Experimental Investigation on the Polypropylene Fiber Concrete Performance of Yellow River Canal Lining in the Middle Line of South-to-North Water Transfer Project H.G. Fang, P.H. Liu and T. Zhang	1987
Research about Application of Informatization Service on Tourism Economy Management X.F. Wang	1992
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