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Robustness analysis of global/local routing in communication networks with interdependent power grid considering cascading failures 1899
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Segmentation of Gastric Cancer Pathological Slice Cancerous Region Based on Lightweight Improved SAM 1903
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An Innovative Study on the Detection of Foreign Objects in Electric Wires 1909
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The development trend of new energy electric vehicles in China 1913
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Hybrid Transformer-CNN Feature Enhancement Network for Visual Object Tracking 1917
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Research on Vehicle Antenna CATR OTA Test and Evaluation for Connected Vehicle 1922
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Analysis of Occupational Exposure and Influencing Factors for 500kV Substation Personnel Based on Neural Networks 1926
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Wind Forecasting based on CEL-LSTM Hybrid Model for German Farm 1930
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Conductivity and hardness prediction of Cu-Cr-Zr via feature augmentation on Geodesic curve 1937
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Research on Risk Assessment of Land Acquisition Based on Neural Networks Model 1942
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Segmentation Method for Infrared Images of Substation Equipment Based on DeepLabv3+ Neural Network 1947
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Strength Calculation and Simulation Study of Threaded Connection of Penetration Fuze 1952
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Optimization of Architectural Landscape Space Based on Fuzzy algorithm 1958
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Optimization Research of Intelligent Algorithms in the Design of Overcharge and Overdischarge Protection Mechanism for Lithium Battery Protection Chips 1963
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Short-term prediction model of CNN-LSTM photovoltaic power generation based on improved artificial swarm algorithm 1968
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Research on External Breakage Prevention of Transmission Lines Based on Laser Point Cloud and Visible Light Matching 1974
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Design of Signal Separation Device Based on FFT Algorithm 1980
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Analysis of lithium-ion battery fire accidents based on fault tree analysis modeling 1984
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Diffusion Model based on Transformer 1988
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Implementation of function signal generator based on FPGA 1992
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Simulation Analysis of The Impact of Wind Turbines on VOR/DME 1997
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SCTrans: Motor Imagery EEG Classification Method based on CNN-Transformer Structure 2001
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Deep Learning and Transfer Learning Based Detection of Missing Fasteners for Wind Turbine Installation 2005
Lei Guan, Xu Liu, Feng Gao, Hongzhi Zhao

Design of a weak photocurrent signal processing circuit based on SIPM detector 2010
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The application of SSA-BP neural networks in multi-sensor fire detection systems 2014
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Optimization and Implementation of SRT-16 Floating-Point Divider Based on FPGA 2019
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