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| <i>Xiaoke MA, Jinke CHANG, Keping CHEN, Zhenbin WANG, Haile MA, Xiaoyin CHEN</i> | (1628) |
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| <i>Laner WU, Shujie ZHANG, Fei HAN</i> | (1666) |
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| <i>Xinmei LUO, Danfeng JIANG</i> | (1670) |
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| <i>Dongguang XIAO, Xiaoqiong WANG, Yefu CHEN, Changhui GUO</i> | (1679) |

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| Identification of Dynamic Loads on Hydroelectric Station Based on Wavelet Analysis <i>Wanquan SUN, Zhenyue MA</i> | (1698) |
| Analysis of Wind Resource Assessment and Fans Selection Layout Technology <i>Shaohua XU, Yongfeng REN, Jianlin LI</i> | (1703) |
| Performance Experiment of SCR Denitrification Reactors and Optimization of Ammonia-Nitrogen Molar Ratio <i>Yi XU, Bo LOU</i> | (1707) |
| Performance of Biology Deodorizes Filters Equipped to Change Waste into Biogas <i>Zhenjun XU</i> | (1712) |
| Separation/Upgrading of Bio-Oil and Preparation of CMA Series of Environment Friendly Deicers <i>Yingmei XU, Qian LIU, Chunhua ZHANG, Wei ZHANG, Qiumin ZHANG</i> | (1716) |
| Experimental Study on Absorption of Carbon Dioxide into Aqueous Activated MDEA for Biogas Upgrading <i>Yingshu LIU, Quanmin XUE, Hui ZHANG, Yongling LI, Wenhai LIU</i> | (1720) |
| Analysed the Component of the Flash Cracking Production of Wheat Straw by Pyrolysis-Gas Chromatography / Mass Spectroscopy <i>Yong XUE, Qiang HUANG</i> | (1724) |
| Low Coal Model and Standard Research of Rail Transportation for Large City <i>Chunhai GAO, Fei YAN</i> | (1729) |
| Vibration Analysis of Offshore Wind Turbine Monopile Foundation Due to Sea Current <i>Dayu YANG, Qi YUAN, Bin JIA</i> | (1734) |
| Research on Performance of Hydraulic Energy Recovery Turbine with Different Blade Inlet Angles and Wrap Angles <i>Junhu YANG, Xiaohui WANG</i> | (1737) |
| Development of a New-Type Well Top Water Heating Furnace <i>Lijun YANG, Zhiren YIN, Ming HE</i> | (1743) |
| Simultaneous Fermentation and Saccharification of Corn Straw and Ethanol Production <i>Peizhou YANG, Shaotong JIANG, Zhi ZHENG, Shuizhong LUO, Guanglan XIONG, Zhanlong MEI</i> | (1748) |
| Study on Steam Explosion Pretreatment of Poplar Tree and Ethanol Production <i>Peizhou YANG, Shaotong JIANG, Zhi ZHENG, Shuizhong LUO, Zhanlong MEI, Chaomeng LI</i> | (1752) |
| Structure and Function of the Strategic Adjustment and Layout of Farmland Ecosystem in Changsha <i>Renbin YANG, Dajuan WAN, Haoran XU, Haiyu LIAO, Zhen TANG</i> | (1755) |
| Research on Overburden Movement and Ground Surface Subsidence Rules in Mining Extremely-Thick Coal Seam <i>Shengli YANG, Jiachen WANG, Shengming WANG</i> | (1760) |
| Numerical Study on the Micromixing Performance of Vertical Circulative Impinging Stream Reactor (VCISR) with Different Inclination of Paddles and Different Paddle Layout <i>Xia YANG, Zhihui MAO, Liyun LIANG, Yanyang WU, Jie ZHANG, Tao ZHANG, Xianzhong ZHENG, Jia GUO</i> | (1766) |
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| Experimental Study on Impact Factors of Lean Burn Technology for Electronic Control LPG Engine <i>Xigui YAO, Wei ZHENG, Li YUAN, Guangming XUE</i> | (1781) |
| Verification Analysis of a Phenomenon of MPPT Invalidation <i>Minghui YIN, Dizheng KUAI, Qun LI, Lihui WANG, Yun ZOU</i> | (1785) |
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| <i>Yan YIN, Xinglong CHEN, Shuhai YU, Xiaole YANG, Qing DU</i> | (1794) |
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| <i>Dengxiang JI, Ping YU, Ning AI, Chengjie HUANG, Tengyue CAI, Fengwen YU, Jianbing JI</i> | (1803) |
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| <i>Yawei ZHAI, Yong LI, Lei LIU, Yue LI, Xiaoyan ZHU, Jiaping WANG</i> | (1809) |
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| <i>Xia YANG, Tao ZHANG, Liyun LIANG, Yanyang WU, Zhihui MAO, Jia GUO</i> | (1814) |
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| <i>Baohua ZHANG, Ning QING</i> | (1821) |
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| <i>Biguang ZHANG, Songlin YI</i> | (1825) |
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| <i>Chaohui ZHANG, Chenhui ZHANG, Sisi LIU, Junming LIU</i> | (1831) |
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| <i>Xing GAO, Dianguang ZHANG, Jie YUAN</i> | (1836) |
| Simulation of Three-Phase Induction Motor Fed by Unbalanced Voltages | |
| <i>Hongbao ZHANG</i> | (1842) |
| Isolation of a Desulfuricant Strain and Its Biological De-Composition to Na ₂ S ₂ O ₃ | |
| <i>Fengbo CAO, Jianbin ZHANG, Lihua LIU, Zhanying LIU, Tong ZHANG</i> | (1847) |
| Preparation of SO ₄ ²⁻ /SnO ₂ and Its Catalytic Performance for Synthesis of Ethyl Acetate | |
| <i>Jiaojing ZHANG, Hua SONG</i> | (1851) |
| Experimental Study of Cornstalk Gasification with Supercritical Water | |
| <i>Jun ZHANG, Liang ZHAO, Na ZENG, Changdong SHENG</i> | (1855) |
| Electrochemical Preparation of Polypyrrole Electrode for Dye-Sensitized Solar Cell | |
| <i>Jun ZHANG, Xiaoxue LI, Tubshin HREID, Haiou SHEN</i> | (1859) |
| Numerical Simulation of Cylindrical Thermal Storage Unit in Vertical with PCM of Al-Si Alloy | |
| <i>Li ZHANG, Guansheng CHEN, Renyuan ZHANG, Feng LI, Wenjie DU</i> | (1861) |
| Application and Economic Analysis of Soil Source Heat Pump | |
| <i>Li ZHANG, Lian DUAN, Xingwang TIAN</i> | (1866) |
| Discussion on New Energy Utilization Modes in Qinhuangdao Countryside | |
| <i>Liang ZHANG, Liwen CHEN, Shuzhen LI, Shuying MA, Lina CUI</i> | (1871) |
| Correlation Analysis of Air and Soil Temperature in Passive Solar Greenhouse | |
| <i>Linhua ZHANG, Lina CHANG</i> | (1874) |
| Study on Preparation and Electrochemical Properties of Mixed Ionic Liquid Electrolyte 1 Spiro Cyclic Quaternary | |
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| <i>Qingguo ZHANG, Chengli ZHANG, Kedi CAI, Zhenxing JIN</i> | (1878) |
| Contrastive Research of Single U-pipe and Double U-pipe Borehole on Heat Performance | |
| <i>Quan ZHANG, Xikuai HOU, Jie WU</i> | (1881) |
| Scientific Principles of Dujiangyan Project Operation for more than 2000 Years | |
| <i>Shanghong ZHANG, Shihua LE, Xingkui WANG</i> | (1886) |
| Simulation and Experimental Studies of Catalytic Combustion Burner V | |
| <i>Ning LI, Shihong ZHANG</i> | (1892) |
| The Energy Saving Analysis of Greenhouse Solar Thermal Storage Pool in Cold Area | |
| <i>Xinqiao ZHANG, Xingying WU</i> | (1896) |

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|---|--------|
| Progress of Research on the Application of Bio-Oil as a Chemical Raw Material <i>Xuming ZHANG, Qiang LU, Changqing DONG, Junjiao ZHANG</i> | (1901) |
| Development and Application of Green Natural Coldness Resource in Winter <i>Yan ZHANG, Shiqing WANG</i> | (1905) |
| Discuss on Optimization Design for Energy Saving of Nutrient Remove of Urban Sewage Treatment <i>Yanqiu ZHANG</i> | (1910) |
| Recent Developments in the Wastewater Sludge Solar Heatpump Drying Technology <i>Zhentao ZHANG, Luwei YANG, Yanhua DONG, Jun LV, Chuanqi WANG</i> | (1913) |
| The Progress of Bio-Oil Upgrading <i>Zhifei ZHANG, Qiang LU, Changqing DONG, Junjiao ZHANG</i> | (1918) |
| Experimental Research on Binary Ice Preparation by Vacuum Method <i>Xuelai ZHANG, Mei YU, Shuxuan YU, Yuanpei LIN</i> | (1923) |
| Based on MW-Wind Turbine Blade Model Experimental Study on Power Characteristic <i>Danping ZHAO, De TIAN, Shuangqun WU, Baoqing XU</i> | (1928) |
| Study on the System of Slope Stability Analysis and Estimate Based on GIS and Its Application <i>Junlan ZHAO, Keren CHEN</i> | (1932) |
| Flexible Dye-Sensitized Solar Cells Based on Carbon Nanotube and Graphene Transparent Conductive Films <i>Lijia ZHAO, You ZENG, Ying ZHEN, Xi CHEN, Fangxiao SHI</i> | (1939) |
| Design of Vertical Axis Magnetic Suspension Wind Generator Monitoring System Based on Labview <i>Wen ZHAO, Shuqin LIU</i> | (1942) |
| Combined Supercritical / Subcritical Pretreatment and Hydrolysis of Stalks for Ethanol Production <i>Yan ZHAO, Wenjing LU, Huayong WU, Jinwen LIU, Hongtao WANG</i> | (1948) |
| Nano-TiO ₂ Prepared with Micro-Emulsion Sol-Gel Method <i>Zeqing WANG, Yue CHENG, Chengxing WANG, Zhenbo ZHAO</i> | (1953) |
| Characterization of MgO-Al ₂ O ₃ Oxides and Catalytic Behaviors in Transesterification of Soybean Oil to Biodiesel <i>Yue CHENG, Zeqing WANG, Chengxing WANG, Zhenbo ZHAO</i> | (1957) |
| Biodegrading Characteristics of New Microbial Community LZF-12 Using Straw Pretreated by Alkali <i>Guoxiang ZHENG, Wenzhe LI, Yuting CHONG, Zhengjun GUAN, Wenling ZHENG</i> | (1962) |
| Phase Equilibrium Model and Partial Molar Volume Calculation for Cyclohexanol and CO ₂ Binary Mixture at High Pressure <i>Lan ZHENG, Lin WANG, Yuqi WANG, Kecun LIU</i> | (1967) |
| The Modern Construction of Irrigation Area in the Water Conservancy Project <i>Rui ZHENG, Yongxiang ZHANG, Shifeng ZHOU</i> | (1972) |
| The Predictive Analysis for Energy Saving and Reducing Emissions of Fuel Cell Vehicles and Traditional Vehicle in Wenzhou <i>Wei ZHENG, Dazhi HU, Xigui YAO</i> | (1976) |
| Liquefaction of Walnut Shell in Phenol and Utilization of Its Liquefied Products <i>Zhifeng ZHENG, Hongjian ZHANG, Yuanbo HUANG, Junchun ZOU, Hao FENG</i> | (1982) |
| Substitution and Contribution of Biomass Energy Utilization for Energy-Saving and Emission Reduction in China <i>Xiaoqing ZHONG, Daqing YE, Suqin XIAO</i> | (1987) |
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