

Can solar power be generated on saline-alkali land

What is saline alkali land used for?

The saline-alkali land in North China Plain is mainly cultivated for commercial crops by enhancing the conditions of farmland water conservancy projects. In the west of Northeast China and coastal saline-alkali land, ecological grass is mainly constructed, and halophytes are planted to develop animal husbandry.

How to improve saline alkali soil in agricultural ecosystem?

Use drainage measures to improve the saline-alkali soil in agricultural ecosystem. The cheapest way for reclamation of saline alkali soil is leaching of salts by irrigation water. Salt discharge was positively correlated with the decrease of groundwater level and soil EC.

What is the cheapest way for reclamation of saline alkali soil?

The cheapest way for reclamation of saline alkali soil is leaching of salts by irrigation water. Salt discharge was positively correlated with the decrease of groundwater level and soil EC. The farther away from drainage measures, the greater the similarity of the bacterial community.

Do solar power stations need a lot of land?

The deployment of PV power stations requires large amounts of land to accommodate solar arrays, roads, and transmission corridors, which will cause large-scale land conversion in desert areas (Edalat and Stephen, 2017; Lovich and Ennen, 2011).

What factors influence soil salinization in soda saline-alkali land?

Xu Xiaohong's research showed that hydrogeology and hydrochemical conditions played an important driving role in the occurrence of soil salinization in soda saline-alkali land in Northeast China, and the main influencing factors are groundwater salinity, groundwater depth, surface and underground runoff intensity.

How does saline alkali land fraction affect temperature humidity?

With the increase in the improved saline-alkali land fraction, the temperature-humidity effect became increasingly significant. As the improved saline-alkali land fraction increased by 50%, the T-2 m decreased by 0.65 °C during the growing season.

This study is based on combining the advantages of solar energy resources and diaphragm electrolysis of saline wastewater discharged from a subsurface pipe in saline-alkali ...

Since the 2010s, saline-alkali soil improvement technology has been promoted to cultivate rice on unused saline-alkali land and has become a new regional land use change characteristic. As a result, western Jilin has ...

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Therefore, to cope with the challenge of food security posed by salinization and explore the optimal DI strategy for crops in saline-alkali land, the objectives of this study were ...

organic fertilizer to a degraded grassland area with photovoltaic panels in Songnen, which is important for maintaining the function of the grassland ecosystem. The objectives of this study are...

the total arable land, seriously threatening the improvement of agriculture and animal husbandry production and eco-logical environment. Many countries and regions have taken various ...

There are ~1.0 × 10⁹ ha of saline-alkali land (7% of all land) around the world [1]. Saline-alkali land is an important cultivated land reserve resource for meeting the ...

The research results obtained by Kang et al. in the experiment of improving coastal saline-alkali land with biochar showed that the application of biochar significantly improved the physical and chemical properties of saline ...

Saline alkali land refers to soil where the accumulated salt content exceeds the level of normal cultivated soil and affects the normal growth of crops [1]. According to incomplete ...

Crop yields are seriously threatened in saline-alkali areas with shallow groundwater levels and high evaporation. Mulching can effectively alleviate salt stress on crops in drylands, but there ...

The accumulation of salt in arable lands is a source of significant abiotic stress, contributing to a 10% decline in the world's total arable lands and threatening food productivity ...

In areas of desertification, saline-alkali land and coal-mining subsidence, models such as "renewable energy + ecological restoration and mining treatment" will be promoted. ...

of governance and saline-alkali land improvement measures. Key words: Saline-alkali land; improvement measures; research status. 1. Introduction Saline-alkali land is a general term for ...

Saline Alkali Land - Solar Park is a ground-mounted solar project which is spread over an area of 400,000 square meters. The project generates 15,000MWh electricity and supplies enough ...

Land salinization is an important type of land desertification. At present, the area of salinized land in the world is as high as 954 million hectares, covering all continents [1]. The ...

The improvement and exploitation of saline-alkali soil is a hot topic worldwide. Analysis of soil aggregate structure and water and of the salt transport law, a new technology that uses humic acid as a saline-alkali soil ...

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Studying the distribution and transport dynamics of cations in plants is crucial for understanding their response mechanisms to saline-alkali stress conditions. However, our current understanding of how restoration

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