# Kale energy storage treatment

Does high-voltage electrostatic field treatment improve Chinese kale storage?
This study confirms the effect of HVEF in inhibiting the vitality of Chinese kale at the metabolic level. In conclusion, high-voltage electrostatic field treatment is considered a strategy that can effectively extend the storage period of Chinese kale and improve storage quality.

Does hvef reduce respiration during Kale storage?
Experimental data reveal that HVEF significantly inhibits respirationand reduces peak respiration during the storage of Chinese kale. It also effectively maintains storage quality attributes such as color,moisture,and chlorophyll content,thereby extending storage time.

Can Chinese kale be stored long-term?
This discovery provides a new theoretical basis for the long-term storage of Chinese kale and promotes the application of HVEF technology in the field of preservation. The data that support the findings of this study are available on request from the corresponding author upon reasonable request.

Does electrical stimulation promote Kale growth?
Taken together, the growth promotion of kale by electrical stimulation shown in the present study could be interpreted as an improvement in cell division and growth due to the stimulation of polar auxin transport and DNA synthesis.

What metabolites are found in Chinese kale stored under hvef treatment?
The results showed that there were significant differences in the metabolite spectrum in Chinese kale stored under HVEF treatment. Screening results revealed that these differential metabolites mainly included vitamins,flavonoids,and alkaloids.

Is Kale sustainable?
Global kale production is challenging to estimate as it is often grouped with cabbage and other brassicas,which encompass a wide variety of commercial crops. Though some perceive organic production as sustainable,it receives criticism for lower yields and nutritional quality.

MXenes, as an emerging family of conductive two-dimensional materials, hold promise for late-model electrode materials in Li-ion batteries. A primary challenge hindering the development of MXenes as electrode materials is that a complete understanding of the intrinsic storage mechanism underlying the charge/discharge behavior remains elusive. This article ...

1. Introduction The global energy demand experienced significant growth and is projected to increase by ~75% between 2000 and 2030. 1 Current commercial fossil fuel energy sources harm the environment, causing irreversible damage to our earth. Hydrogen is a desirable fuel with a high gravimetric energy density

(higher and lower heat values: ~142 kJ g -1 and ~120 kJ g -1 ...

ABSTRACT The current investigation was conducted to evaluate the result of gamma irradiation doses and kale leaf powder (KLP) on microbiological assay (total aerobic bacteria and coliforms), quality parameters (Hunter"s color [L*, a* and b*] and heme pigment [Mb and MetMb]) and stability modifiers (total volatile basic nitrogen [TVBN], thiobarbituric acid reactive substances ...

Design and fabrication of energy storage systems (ESS) is of great importance to the sustainable development of human society. Great efforts have been made by India to build better energy storage systems. ESS, such as supercapacitors and batteries are the key elements for energy structure evolution. These devices have attracted enormous attention due to their ...

treatment had four replications. Chinese kale was planted in wooden plots of 0.3 × 0.8 × 0.3 m (width × length × depth) on the rooftop 14th floor( ) of Chula Unisearch building, located in the heart ... storage in the form of the Chinese kale biomass was calculated from the complete biomass (roots, stem, stalks and leaves) by random ...

For kale, the light compensation points at 500 nm and 560 nm were 50.8 and 44.1 mmol m-2 s-1, respectively. For the storage test experiment at room temperature, kale and spinach were stored under four different treatments: dark treatment (control), standard white fluorescent light, 500 nm, and 560 nm LED wavelengths.

The conventional energy resources can be replaced and/or accompanied by solar power, wind energy, and water energy, but these energy resources need efficient conversion and storage devices. The storage devices, such as batteries and supercapacitors, can be useful to store the excess energy and use it whenever needed.

The aim of the research undertaken by the authors of the manuscript was to investigate the effect of melatonin on Chinese kale after harvest and to discover the mechanisms underlying the delayed aging of Chinese kale leaves during storage. The first part of the research for the adopted purpose was carried out very sparsely.

On the contrary, for kale microgreens, on D 1 of storage, 200 µmol m -2 s -1 PPFD treatment when stored in the dark resulted in the lowest a-tocopherol contents. On D 3, the light storage conditions seemed to produce a decrease in a-tocopherol contents in the same mentioned 200 µmol m -2 s -1 PPFD in kale microgreens.

Kale is a leafy green that"s rich in a wide range of nutrients, helping to prevent various health problems. ... including, growth conditions, plant stage, plant tissue analyzed, storage conditions, and preparation and cooking methods. Some studies have shown a positive impact of specific glucosinolates, like sulforaphane, and their ability to ...

Metal-organic frameworks (MOFs) with high conductivity have proven to be an exciting electrode material for energy storage devices. However, most of the MOFs exhibit a low electrical conductivity, which limits their

use in supercapacitors. To overcome this issue herein, a simple acid treatment method was adopted to obtain nanoflower-like nickel 2-methylimidazole ...

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