

Is China's new energy vehicle battery industry coevolutionary?

Empirically, we study the new energy vehicle battery (NEVB) industry in China since the early 2000s. In the case of China's NEVB industry, an increasingly strong and complicated coevolutionary relationship between the focal TIS and relevant policies at different levels of abstraction can be observed.

Why is BYD a leading producer of new energy vehicles?

China is one of the major producers of new energy vehicles globally. As an industry leader, BYD has continued to innovate in the company's development process, realizing an intelligent and sustainable supply chain. With the help of a advanced company to produce 5 million new energy vehicles. By sorting out the advantages and disadvantages

Does a sustainable reverse logistics network work for retired power batteries recycling?

We solve the multi-objective combinatorial optimization model to explore the layout of the sustainable reverse logistics network for retired new energy vehicle power batteries recycling. A case study is implemented to verify the effectiveness of the proposed model.

Who dominates the research on NEV battery recycling?

These results indicate that Garg, Akhil dominates in research on NEV battery recycling. There are mutual collaborations between these authors, such as Garg, Akhil and Gao liang; Park, Sanghyuk and Kwon, Kyungjung; Lai, Xin and Zheng, Yuejiu (Fig. 10). Meanwhile, the number of papers published by the top 20 authors accounts for 12.15 % of the total.

Why do new energy vehicle manufacturers participate in battery recycling?

He et al. (2021) found that a dynamic reward and punishment mechanism can effectively encourage consumers and new energy vehicle manufacturers (NEVMs) to participate in battery recycling to protect the environment. Moreover, recycling cost is a key factor that prevents NEVMs and supply-side groups from participating in recycling activities.

How to promote the use of Nev batteries?

To promote the use of NEVs, multiple values of battery recycling in terms of economic benefits and environmental protection are considered. Establishing a management system for the full life cycle of NEV batteries should be promoted. Fig. 9. Bubble chart showing annual trends for the top 20 journals in publications. 3.5.

With the expansion of the new energy vehicle market, electric vehicle batteries (EVBs) have entered a massive retirement wave. The strategic level of facility location and configuration decisions and the tactical level of multi-product flow and multi-technology selection decisions have been integrated into a sustainable reverse

logistics ...

The new energy vehicle supply chain is evolving rapidly to meet growing market demand, and innovations in battery technology, motor manufacturing, and charging infrastructure,...

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Empirically, we investigate the developmental process of the new energy vehicle battery (NEVB) industry in China. China has the highest production volume of NEVB ...

Electric vehicle (EV) battery technology is at the forefront of the shift towards sustainable transportation. However, maximising the environmental and economic benefits of ...

The forward logistics network of new energy vehicle batteries is complex, resulting in the difficulty of reverse logistics. First of all, the positive logistics of the battery of new energy vehicles involves

Design of the Reverse Logistics Network of New Energy Vehicle Waste Power Batteries Longyu He^{1*} School of Economics, Wuhan University of Technology, Wuhan, China Abstract. While making an optimistic estimate of the development prospects of new energy vehicles, this article pays attention to the problem of waste power batteries for new energy ...

In this paper, we considered multiple kinds of waste electric vehicle batteries (WEVBs) with multiple recycling technology and constructed a multi-level SRLN model for WEVBs with the objectives...

In this paper, NEV is defined as the four-wheel vehicle using unconventional vehicle fuel as the power source, which includes hybrid vehicle (HV), battery electrical vehicle (BEV), fuel cell electric vehicle (FCEV), hydrogen engine vehicle (HEV), dimethyl ether vehicle (DEV) and other new energy (e.g. high efficiency energy storage devices) vehicles.

Fig. 1. Regional Policy Extension 2.3 Analysis of the development of new energy vehicles Shenzhen, Guangzhou, Beijing and other economically developed, better infrastructure of the first-tier cities

New energy vehicles (NEVs) are considered to ease energy and environmental pressures. China actively formulates the implementation of NEVs development plans to promote sustainable development of the automotive industry. In view of the diversity of vehicle pollutants, NEV may show controversial environmental results. Therefore, this paper uses the quantile-on ...

PDF | On Jan 1, 2024, ? ? published Research on Recycling Status and Countermeasures of New Energy

New Energy Logistics Vehicle Battery Research and Development

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This article proposes suggestions such as increasing research and development efforts for new energy vehicles, accelerating the construction of charging and ...

In the urban delivery sector, expanding the use of new energy vehicles (NEVs) can have a considerable positive impact on low-carbon sustainable development.

In recent years, with the high awareness of the Chinese government on environmental protection, and support to the development of new energy, new energy vehicles have got developed to a certain ...

Electric vehicle (EV) battery technology is at the forefront of the shift towards sustainable transportation. However, maximising the environmental and economic benefits of electric vehicles depends on advances in battery life cycle management. This comprehensive review analyses trends, techniques, and challenges across EV battery development, capacity ...

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