

Hydrogen energy storage patent

What is a hydrogen storage power system?

The power system containing hydrogen storage can be divided into power generation, energy storage, or load according to the different parts. Ensuring the system's safe operation and achieving the system's operating goals requires an appropriate energy management control strategy.

What is a hydrogen patent?

Their patent portfolios are mainly focused on production by electrolysis and applications based on fuel cells but also extend to established technologies for the storage and distribution of liquid or gaseous hydrogen, an area of focus for these countries which plan to import stored hydrogen in the near future.

Is hydrogen storage a viable energy management system?

The development of the current energy management system containing hydrogen storage is promising. Future research will focus on multi-energy complementary energy management systems combined with big data and intelligent autonomous optimization design.

What happened to hydrogen patenting in the US?

By contrast, hydrogen patenting decreased significantly in the US after 2015, and the US was a distant third to the EU and Japan in 2020, despite being the main innovator in hydrogen in 2011 in terms of volume of international patent families.

Why do we need patents for hydrogen energy?

Through patenting, inventors seek to ensure that they can recoup these investments in innovation. Coordinating the deployment of the full hydrogen energy value chain is perhaps the most complex of all the technical challenges facing energy engineers and it is sometimes hard to discern the status of all the underpinning technology areas.

Which companies have patented hydrogen technology?

Two Japanese companies - Toyota and Honda - as well as R. Korea's Hyundai stand out. All three feature in this list thanks to patent portfolios in established technologies for the storage, distribution and transformation of gaseous or liquid hydrogen.

Highlights o Zero carbon technologies facilitate the clean energy transition on specific technology trajectories.
o Hydrogen electrolyser benefits energy storage technologies ...

Research on storage and transportation technology of low-temperature liquid and solid materials should be enhanced to achieve a low-cost and large-scale supply of hydrogen; for downstream ...

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