

عنوان مقاله:

A review of hydrogen economy and its application in greenhouse gas reduction

محل انتشار:

دومین کنفرانس ملی و اولین کنفرانس بین المللی چالش های محیط زیست: صنعت و معدن سبز (سال: 1403)

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خلاصه مقاله:

The notion of a hydrogen economy frequently centers around the production of clean hydrogen for a variety of applications. Nevertheless, there is an additional intriguing aspect that warrants exploration. The utilization of surplus hydrogen that is already being generated in industrial processes for heating purposes presents a compelling opportunity. Numerous industrial processes, such as chemical refineries and steel production, produce hydrogen as a byproduct. Frequently, this surplus hydrogen is simply burned off, essentially squandered, and adding to the emission of greenhouse gases. This is precisely where the notion of capturing and utilizing this excess hydrogen emerges as an appealing proposition. The hydrogen economy transcends the mere production of new hydrogen; it also encompasses the astute exploitation of existing resources. The act of capturing surplus industrial hydrogen for heating purposes presents a mutually beneficial scenario - it diminishes emissions, enhances efficiency, and potentially yields cost advantages. As we ardently pursue a future driven by clean energy, this approach merits profound consideration in order to unleash the complete potential of hydrogen within the industrial domain. This groundbreaking innovation not only curtails greenhouse gas emissions by substituting fossil fuels for heating but also promotes energy autonomy within industrial establishments. By delineating the technical feasibility and conceivable economic advantages of this strategy, this research sets the stage for a more sustainable and independent industrial environment.

کلمات کلیدی:

hydrogen economy, heating purposes, greenhouse gases, clean energy, fossil fuels :

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