

Research and Development Targets and Priorities

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Abstract

Coming from the state of energy distribution and conversion technologies there are many alternatives for transforming the energy system to a hydrogen economy. Many techniques could be introduced for the same purpose but level of development and benefit differ from time to time. Therefore the paper highlights targets of a sustainable energy system, political frameworks, scenarios of infrastructural developments and the state of the art for several hydrogen technologies. The most relevant research fields which were identified concern the reduction of expenses for efficient catalysis by reducing material inputs as well as manufacturing costs of fuel cells and the development of large scale (HT-)electrolysis for adapting to regenerative electricity.

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