

3. Hydrogen from coal

Prospects for hydrogen from coal

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With increasing concern over greenhouse gases and the move towards the ‘hydrogen economy’, coal needs to overcome the obstacle of being the most carbon intensive energy source. This paper gives a summary of a new report from the IEA Clean Coal Centre, ‘*Prospects for hydrogen from coal*’ which reviews the mainly theoretical studies being undertaken as interest in a hydrogen economy growth. The study gives an overview of new concepts developed worldwide for the production of hydrogen and clean fuels from coal as well as projects currently under development for the co-production of hydrogen, clean fuels and electricity from coal syngas. It highlights the advancements in technologies such as membrane technologies, for gas separation (hydrogen and carbon dioxide) as well as CO₂ capture from coal syngas produced under industrial conditions. Finally it gives examples of some major economic studies on the production of hydrogen from coal.