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Titel des Beitrags:
Assessment of oxy-fuel, pre- and post-combustion-based carbon capture for future IGCC plants

Abstract:
Environmental damage due to the emission of greenhouse gases from conventional coal-based power plants is a growing concern. Various carbon capture strategies to minimize CO2 emissions are currently being investigated. Unfortunately, the efficiency drop due to de-carbonization is still significant and the capture rate is limited. Therefore three future hard coal IGCC concepts are assessed here, applying emerging technologies and various carbon capture approaches. The advanced pre-combustion capture concept is based on hot gas clean-up, membrane-enhanced CO conversion and direct CO2 condensation. The concept reached a net efficiency of 45.1

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