

## Characterization of Carbon Dioxide-Rich Flue Gas Sources for Conversion to Chemicals and Fuels

**Authors :** Adesola Orimoloye, Edward Gobina

**Abstract :** Flue gas is the most prevalent source of carbon dioxide off-gas from numerous processes globally. Among the lion's share of this flue gas is the ever - present electric power plant, primarily fuelled by coal, and then secondly, natural gas. The carbon dioxide found in coal fired power plant off gas is among the dirtiest forms of carbon dioxide, even with many of the improvements in the plants; still this will yield sulphur and nitrogen compounds; among other rather nasty compounds and elements; all let to the atmosphere. This presentation will focus on the characterization of carbon dioxide-rich flue gas sources with a view of eventual conversion to chemicals and fuels using novel membrane reactors.

**Keywords :** Flue gas, carbon dioxide, membrane, catalyst, syngas

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