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(54) Title: METHOD FOR PURIFYING CARBON DIOXIDE

(57) **Abstract:** The invention is a method for the decontamination of CO₂ to a sufficient level of purity to allow it to be used in the semiconductor industry. The invention comprises the exposure of fluid CO₂ to a combination metallic states of at least one metal under the appropriate conditions for removal of contaminants. The adsorbents are then decontaminated/activated to return the adsorbent to a mixed oxidation state and allow further rounds of decontamination. The adsorbents are selected to be complimentary to each other, preferentially adsorbing different contaminants. Additionally, the adsorbents are selected to undergo reduction differently such that upon regeneration only a portion of the metals are reduced and the adsorbent is returned essentially to its original state.

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