

Fig 1/13

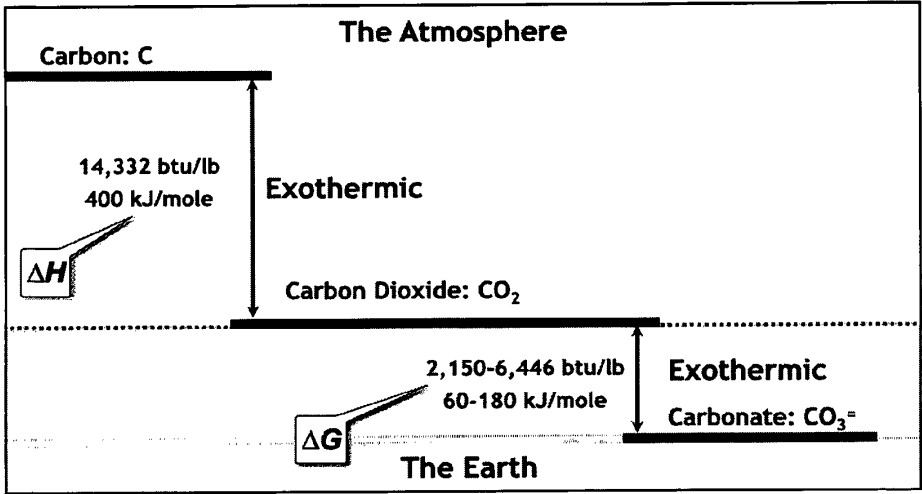


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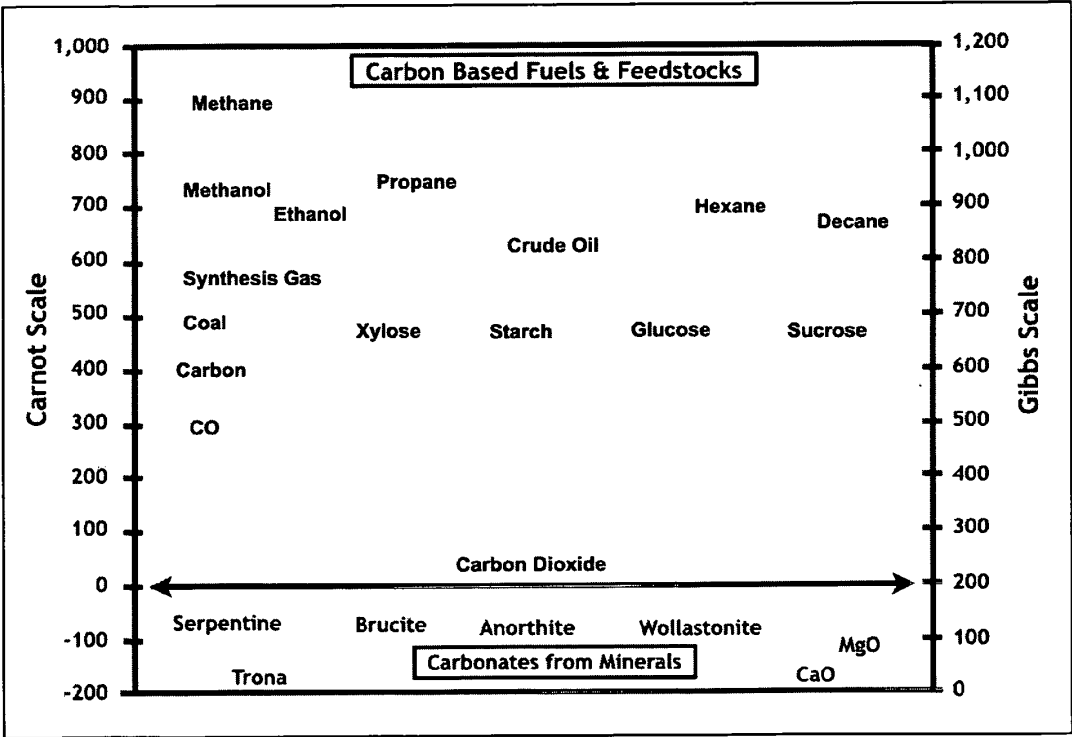


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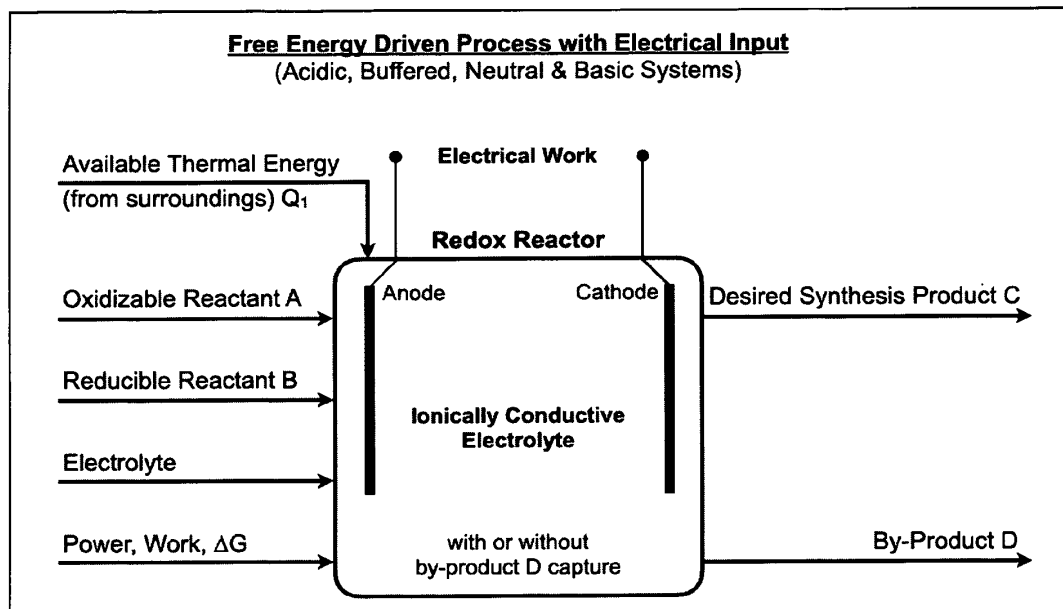


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Reactant A + Reactant B + energy, power, $\Delta G \Rightarrow$ Desired Product C + By-Product D						
Oxidizable Reactant A	Reducible Reactant B	Ionically Conductive Electrolyte	Work, Power, ΔG	Electron Transfer Material	Desired Product C	By-Product D
Amines	H ₂ O	Alkali Metal Hydroxides	Heat	Conductive Metals	Hydrogen	Oxygen
Sulfure		Alkali Earth Metal Hydroxides	Electricity	Precious Metals	Hydrocarbons	Bicarbonate
Alcohols		Organic Nitrogens	Vibrations	Carbon	Alcohols	
Paraffins		Carbonates	Sonics	Intermetallics	Ammonia	
Alkanes		Phosphoric Acid	Piezoelectrics	Titanium Suboxide		
Alkenes		Hydrohalic Acid	Pressure	Magnesium Suboxide		
Carbon		Sulfuric Acid	Radiations	Carbides		
CO ₂		Solid Polymer Electrolytes	Magnetics	Nitrides		
H ₂ O		Ionic Liquids (Low Temp.)	Induction	Borides		
		Fused Salts (High Temp.)	Non-Uniform Fields	Ceramics		
		Propionates				
<u>Examples:</u>		<u>Examples:</u>		<u>Examples:</u>	<u>Examples:</u>	
CH ₃ OH		KOH, NaOH, H ₃ PO ₄		MgO _{1.8} , TiO _{1.8}	CH ₄	
CH ₄		NaH ₂ PO ₄ , Na ₂ HPO ₄		Boron Nitride	CH ₃ OH	
NH ₃		Na ₃ PO ₄ , H ₂ SO ₄		Nickel Boride	formate	
S		HF, Nafion		Silicon Carbide	CO, CO ₂	

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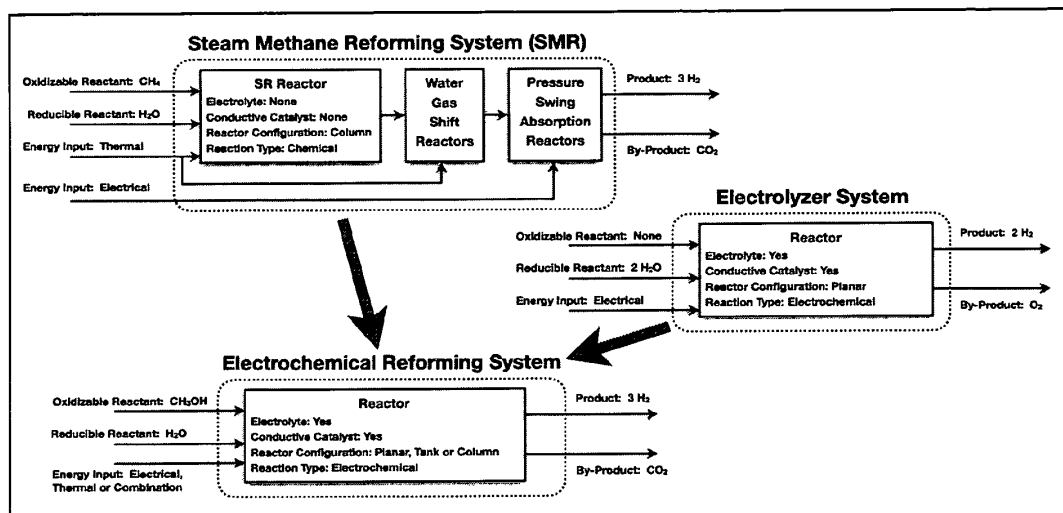


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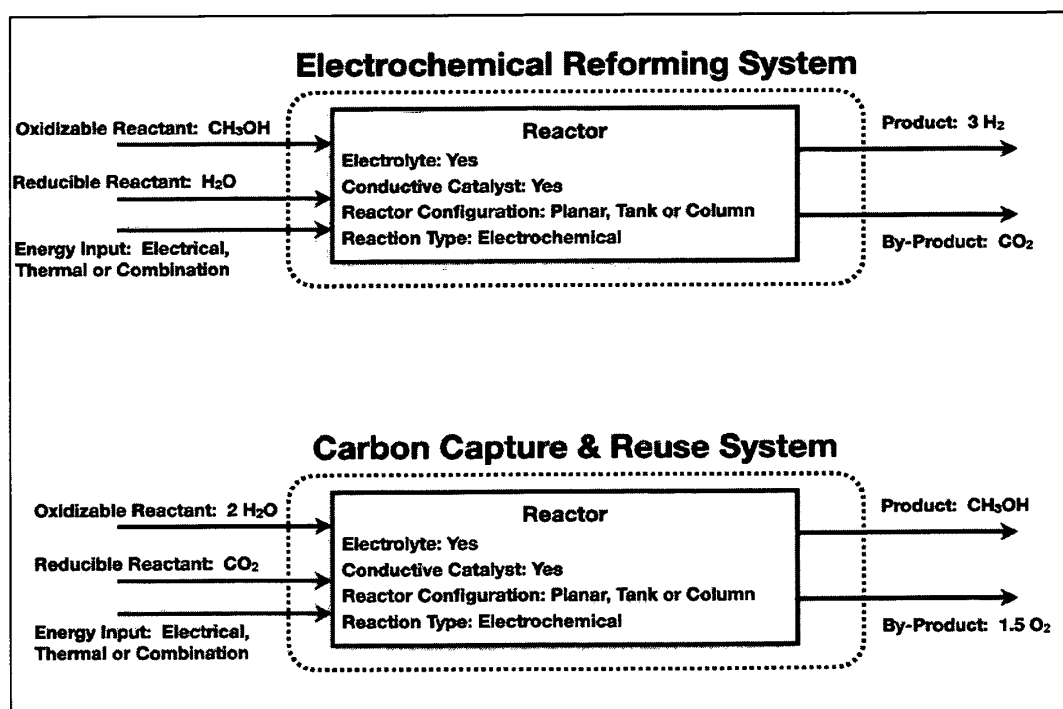


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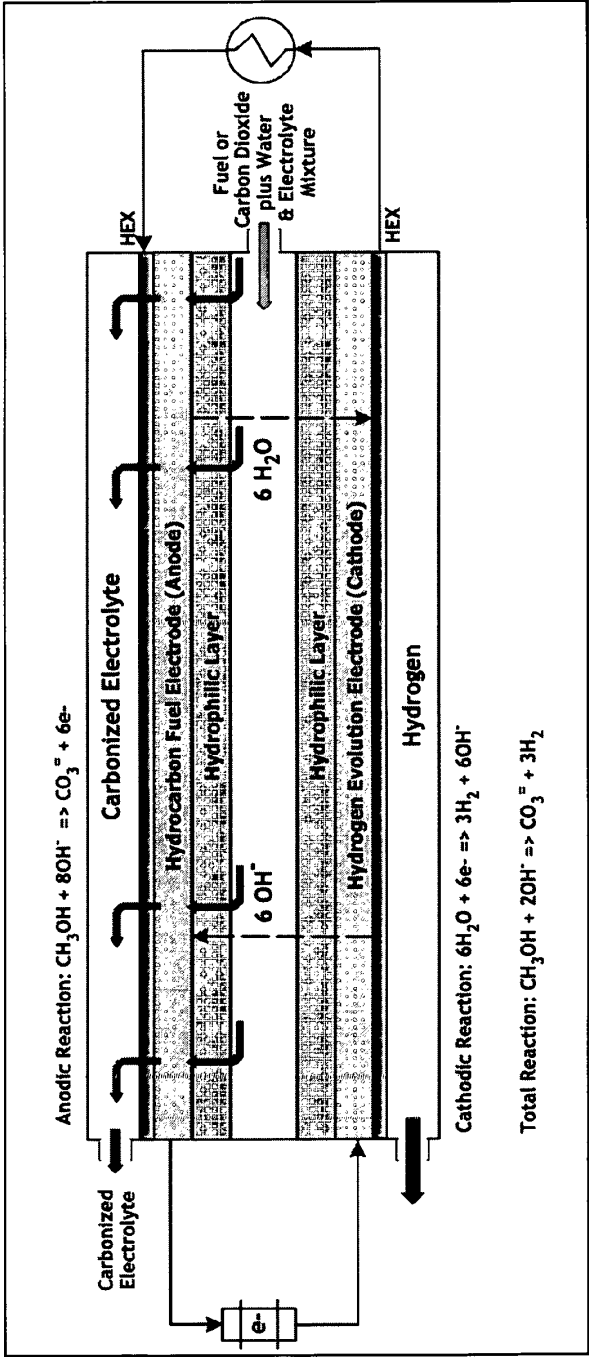


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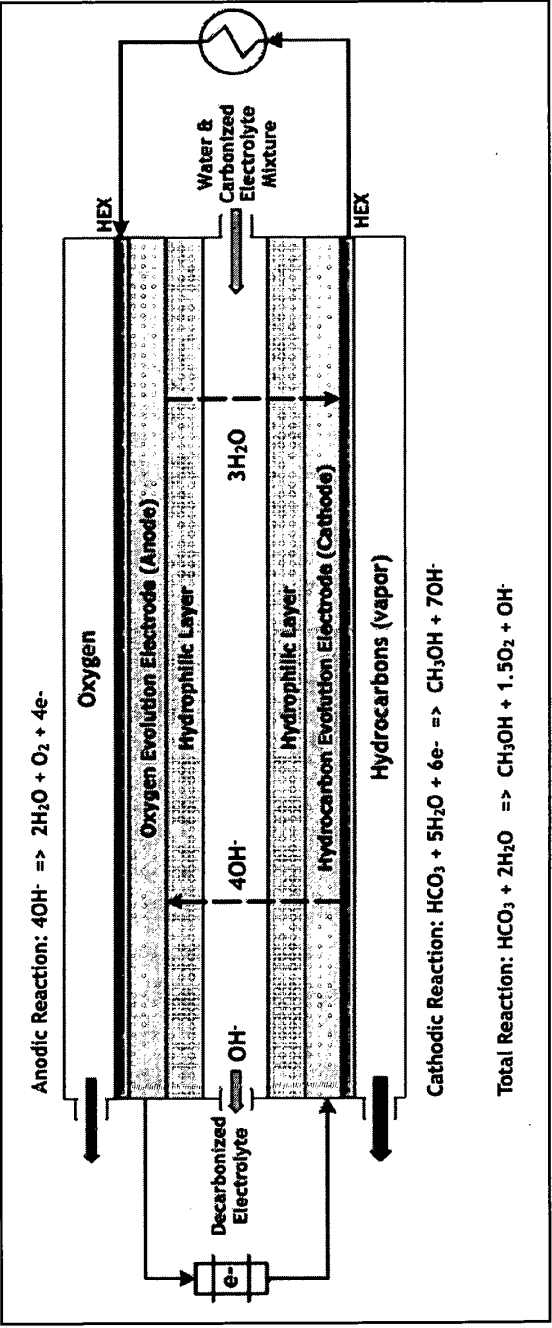


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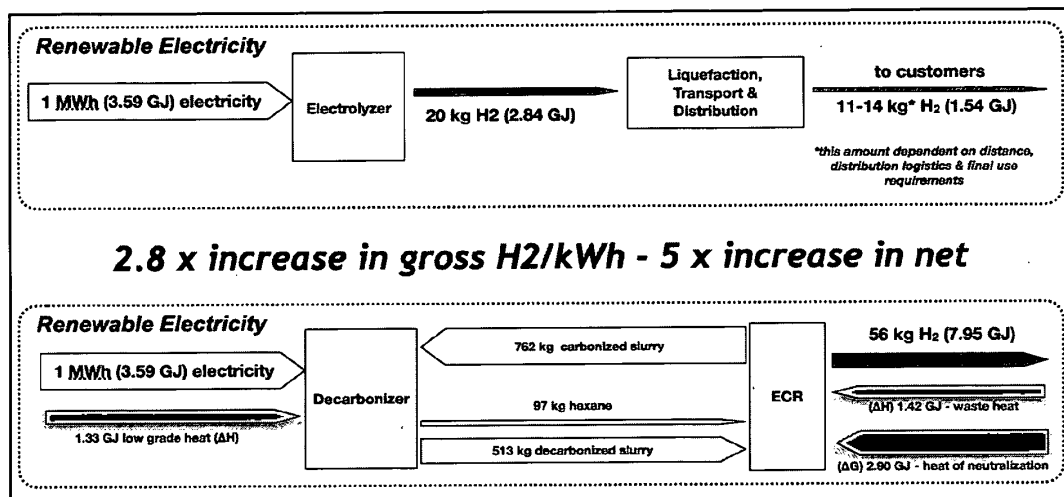


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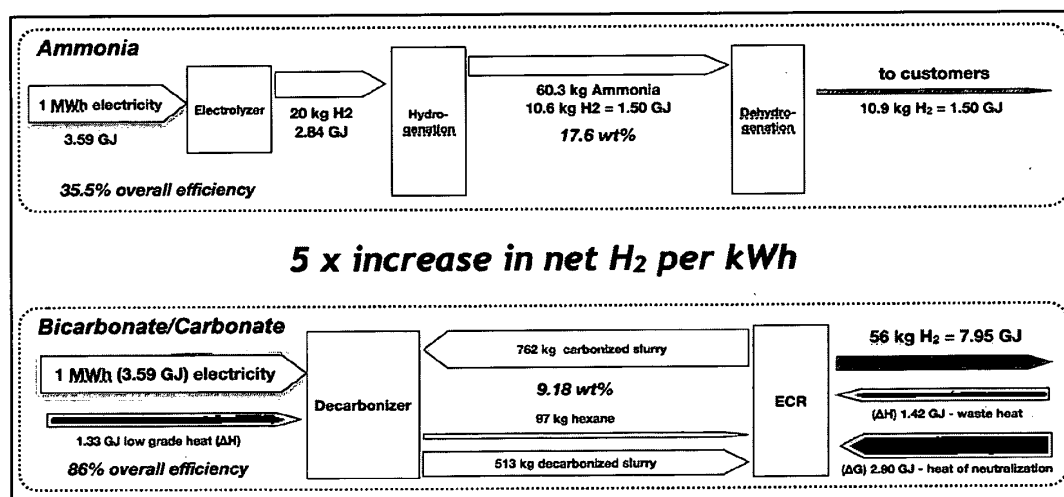


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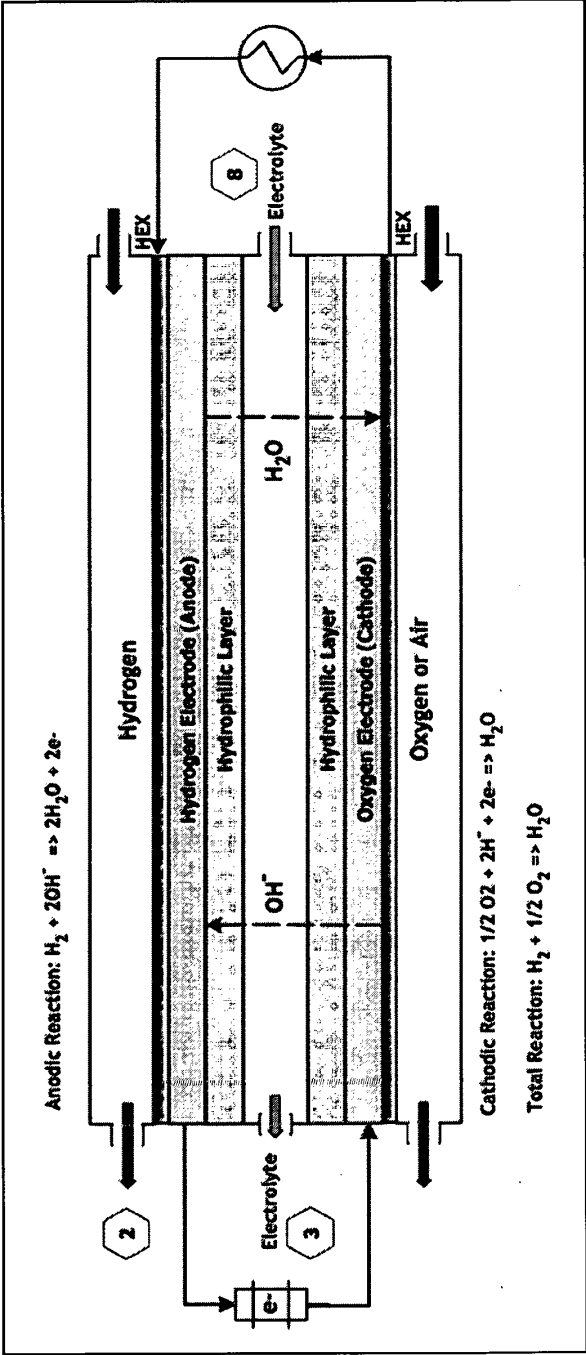


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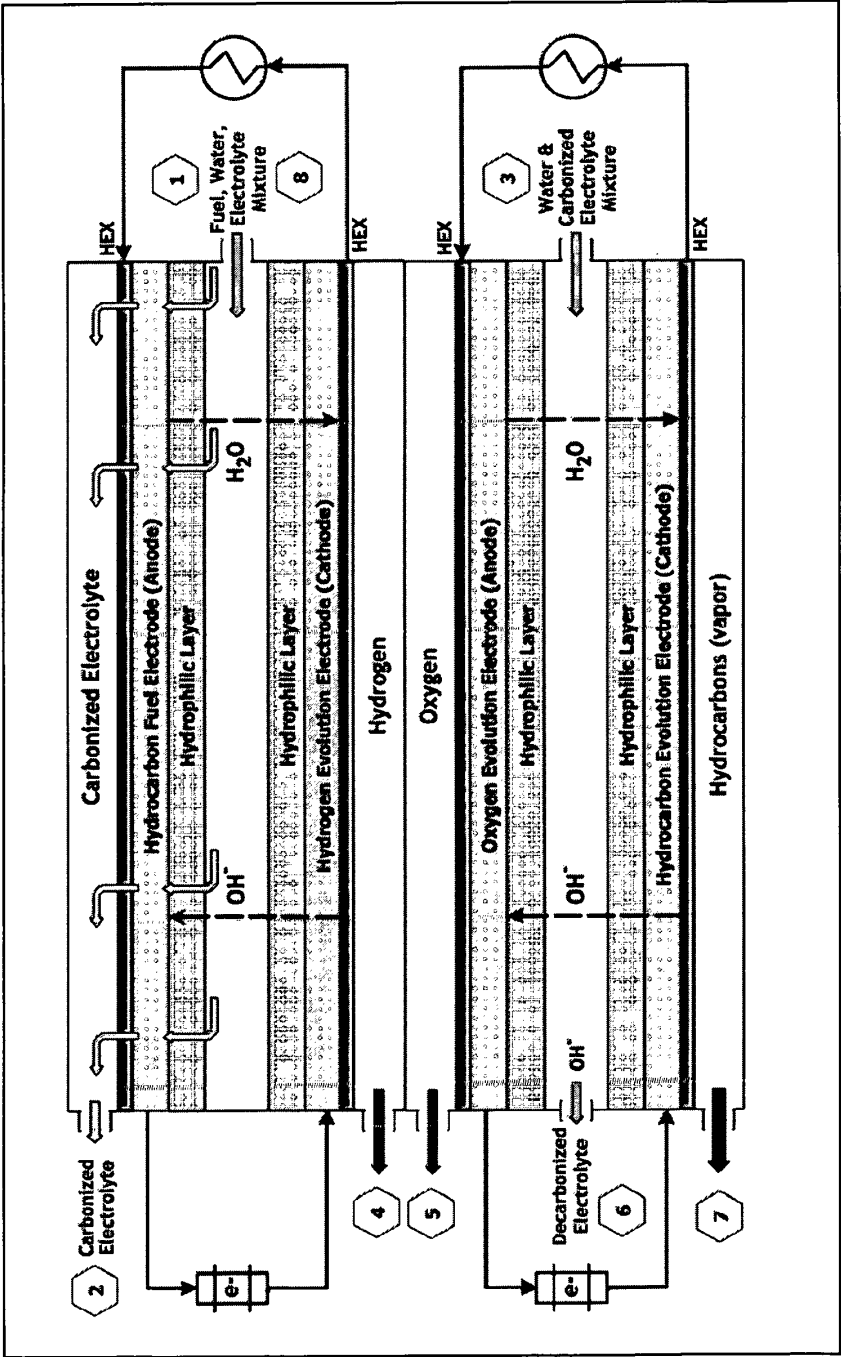


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