



Palladium Alloy Membranes for use in Hydrogen Separation

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Summary: Palladium alloy membranes for hydrogen separation that are resistant to poisoning by sulfide compounds

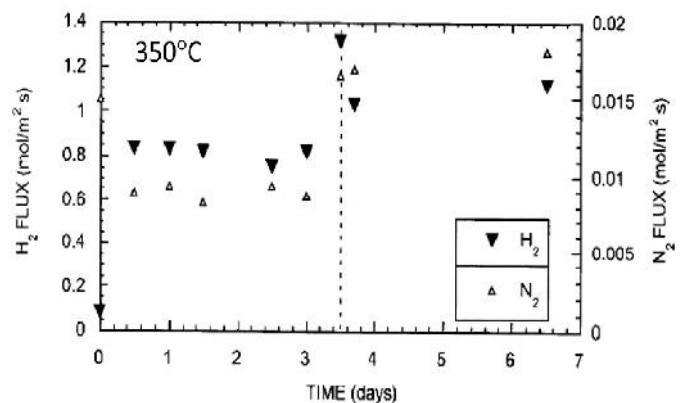
Description: This invention describes a method for producing palladium (Pd) alloy composite membranes that are useful in applications that involve the separation of hydrogen from a gas mixture. In the main application, a Pd alloy composite membrane is realized in which the Pd alloy film is 1 μm or less in thickness and resistant to poisoning by sulfide compounds. The Pd alloy composite membranes are applied to a number of applications, such as fuel reforming.

Main Advantages of this Invention

- Resistant to sulfur poisoning
- Thin membranes result in higher hydrogen flux
- Cost savings

Potential Areas of Application

- Fuel cell applications
- Hydrogen and dehydrogenation reactions
- Hydrocarbon reforming
- Coal and biomass gasification



Flux data for 60 wt. % Pd membrane (thickness 1.5 μm). Note the flux increases due to the "air purge" treatment, shown by the dotted line.

ID number: 6001

Intellectual Property Status: US 8,119,205 and EP 03718215.1

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.

For more information contact:

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