

Retard for Fe metal contamination of Pd membrane by Au protect layer

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Pd membrane is evaluated as a promising technology for CO<sub>2</sub> capture and H<sub>2</sub> separation in the coal gasification process. Currently, efforts are being made to develop a catalytic membrane reactor that can simultaneously conduct the WGS and hydrogen separation processes using a single reactor. However, in the membrane process, catalytic metal elements can be introduced into the membrane reactor, coming into contact with the membrane surface. (however, in the membrane process, the catalyst metal elements flow into the membrane reactor and the contact is possible on the membrane surface.) Such metal particulate matter causes pin-holes and cracks on the membrane, with impacts on the decomposition. This phenomenon reduces the selectivity of the membrane.