

**PROCESS AND SYSTEM FOR SELECTIVE ABATEMENT OF REACTIVE
GASES AND RECOVERY OF PERFLUOROCOMPOUND GASES**

ABSTRACT OF THE DISCLOSURE

Processes and systems to recover at least one perfluorocompound gas from a gas mixture are provided. In one embodiment the inventive process is characterized by the steps of a) providing a gas mixture comprising at least one perfluorocompound gas and at least one carrier gas, the gas mixture being at a predetermined pressure; b) providing at least one glassy polymer membrane having a feed side and a permeate side; c) contacting the feed side of the at least one membrane with the gas mixture; d) withdrawing from the feed side of the membrane as a non-permeate stream at a pressure which is substantially equal to the predetermined pressure a concentrated gas mixture comprising essentially the at least one perfluorocompound gas; and e) withdrawing from the permeate side of the membrane as a permeate stream a depleted gas mixture comprising essentially the at least one carrier gas.

Figure 2