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A Novel Tool for the Modeling, Simulation and Costing of Membrane based Gas Separation Processes using Aspen HYSYS: Optimization of the CO<sub>2</sub> / CH<sub>4</sub> Separation Process

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**Highlights**

- MemCal supports simulating membrane-based gas separation processes in Aspen HYSYS
- Membrane process configuration is selected following a techno-commercial evaluation
- Area distribution control among the various membrane stages is an optimization mean
- Two stages plus recycle is the optimal scheme for purifying natural gas off its CO<sub>2</sub>

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