



DiCAM

Dipartimento di ingegneria civile, chimica, ambientale e dei materiali

Position for post doc or research fellow on the
“Production and characterization of thin films membranes for acid gas recovery in different industrial streams”

Duration 1 year (possibility of extension up to 2 years)
Starting date Beginning of January 2019.

Institution University of Bologna – Department of Civil Chemical materials and environmental engineering.

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The project aims at the development and testing of new membranes for the separation of acidic compounds (CO_2 , H_2S , SO_x) from gaseous streams present in different industrial processes.

The possible applications will span from pre/post combustion carbon capture, to the natural gas sweetening and biogas upgrading.

The first part of the activity will be primarily focused on the production of thin selective coatings on different porous supports, starting from materials which have been identified as of potential interest for the final application.

The membranes will be then characterized through pure gas and mix gas permeability tests, carried out in different operative condition, to ensure the absence of defects on the coated membranes and to investigate the influence of different operative parameters on the membrane durability and separation performances.

The final scope is to define protocols for the preparation of innovative membranes with high flux and selectivity towards the target compounds and to test them in conditions as close as possible to that of real application.

Candidates with experience and good experimental ability will be preferred due to the to the possible use of toxic materials during experiments, and to the need of optimizing the experimental set up to operate in a wide range of conditions.

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