

ECRA Academic Chair publications

Meunier N., Laribi S., Dubois L., Thomas D., De Weireld G., « CO₂ capture in cement production and re-use: first step for the optimization of the overall process », *Energy Procedia*, 63, pp. 6492-6503, 2014.
<https://doi.org/10.1016/j.egypro.2014.11.685>

Gervasi J., Dubois L., Thomas D., « Simulation of the post-combustion CO₂ capture with Aspen Hysys software: study of the different configurations of an absorption-regeneration process for the application to cement flue gases », *Energy Procedia*, 63, pp. 1018-1028, 2014.
<https://doi.org/10.1016/j.egypro.2014.11.109>

Gervasi J., Dubois L., Thomas D., « Screening tests of new hybrid solvents for the post-combustion CO₂ capture process by chemical absorption », *Energy Procedia*, 63, pp. 1854-1862, 2014.
<https://doi.org/10.1016/j.egypro.2014.11.193>

Laribi S., Dubois L., De Weireld G., Thomas D., « Optimization of the Sour Compression Unit (SCU) process for CO₂ purification applied to flue gases coming from oxycombustion cement industries », *Energy Procedia*, 114, 458-470, 2017. <https://doi.org/10.1016/j.egypro.2017.03.1188>

Dubois L., Thomas D., « Simulations of various configurations of the post-combustion CO₂ capture process applied to a cement plant flue gas: parametric study with different solvents », *Energy Procedia*, 114, 1409-1423, 2017. <https://doi.org/10.1016/j.egypro.2017.03.1265>

Laribi S., Mouhoubi S., Dubois L., De Weireld G., Thomas D., « Study of the post-combustion CO₂ capture applied to conventional and partial oxy-fuel cement plants », *Energy Procedia*, 114, 6181-6198, 2017.
<https://doi.org/10.1016/j.egypro.2017.03.1756>

Laribi S., Dubois L., De Weireld G., Thomas D., « Post-combustion CO₂ capture process applied to flue gases with high CO₂ contents: micro-pilot experiments and simulations », *CIEM 2017*, Ref. 17412244, 2017. <https://doi.org/10.1109/CIEM.2017.8120824>

Dubois L. and Thomas D., « Comparison of various configurations of the absorption-regeneration process using different solvents for the post-combustion CO₂ capture applied to cement plant flue gases », *International Journal of Greenhouse Gas Control*, Vol. 69, pp 20-35, 2018.
<https://doi.org/10.1016/j.ijggc.2017.12.004>

Laribi S., Dubois L., De Weireld G., Thomas D., « Simultaneous absorption of SO₂ and CO₂ from conventional and partial oxy-fuel cement plant flue gases », *Chemical Engineering Transactions*, vol.69, 2018. <https://doi.org/10.3303/CET1869021>

Laribi S., Dubois L., Duprez M-E., De Weireld G., Thomas D., « Simulation of the Sour-Compression Unit (SCU) process for CO₂ purification applied to flue gases coming from oxy-combustion cement industries », *Computers & Chemical Engineering*, vol. 121, pp 523-539, 2019.
<https://doi.org/10.1016/j.compchemeng.2018.11.010>

Chauvy R., Meunier N., Thomas D., De Weireld G., « Selecting emerging CO₂ utilization products for short- to mid-term deployment », *Applied Energy*, 236, 662-680, 2019.
<https://doi.org/10.1016/j.apenergy.2018.11.096>

Laribi, S., Dubois L., De Weireld G., Thomas D., « Study of the post-combustion CO₂ capture process by absorption-regeneration using amine solvents applied to cement plant flue gases with high CO₂ contents », *International Journal of Greenhouse Gas Control*, Vol. 90, 102799, 2019.

<https://doi.org/10.1016/j.ijggc.2019.102799>

Chauvy R., Dubois L., Lybaert P., Thomas D., De Weireld G., « Production of synthetic natural gas from industrial carbon dioxide », *Applied Energy*, 260, 114249, 2020.

<https://doi.org/10.1016/j.apenergy.2019.114249>

Meunier N., Chauvy R., Mouhoubi S., Thomas D., De Weireld G., « Alternative production of methanol from industrial CO₂ », *Renewable Energy*, 146, 1192-1203, 2020.

<https://doi.org/10.1016/j.renene.2019.07.010>

Chauvy R., Lepore R., Fortemps P., De Weireld G., « Comparison of multi-criteria decision-analysis methods for selecting carbon dioxide utilization products », *Sust. Prod. Cons.*, 24, 194-210, 2020.

<https://doi.org/10.1016/j.spc.2020.07.002>

Mouhoubi S., Dubois L., Fosbol P.L., G. De Weireld, Thomas D., « Thermodynamic modeling of CO₂ absorption in aqueous solutions of N,N-diethylethanolamine (DEEA) and N-methyl-1,3-propanediamine (MAPA) and their mixtures for carbon capture process simulation », *Chemical Engineering Research & Design*, 158, pp 46-63, 2020. <https://doi.org/10.1016/j.cherd.2020.02.029>

Chauvy R., De Weireld G., « CO₂ Utilization Technologies in Europe: A Short Review », *Energy Technology*, 2000627, 2020. <https://doi.org/10.1002/ente.202000627>

Chauvy R., Verdonck D., Dubois L., Thomas D., De Weireld G., « Techno-economic feasibility and sustainability of an integrated carbon capture and conversion process to synthetic natural gas », *Journal of CO₂ Utilization*, 47, 101488, 2021. <https://doi.org/10.1016/j.jcou.2021.101488>

Chauvy R., Dubois L., Thomas D., De Weireld G., « Techno-economic and environmental assessment of carbon capture at a cement plant and CO₂ utilization in production of synthetic natural gas », *GHGT-15 Conference Proceedings*, available on [ssrn.com](https://www.ssrn.com), 3811432, 2021.

<http://dx.doi.org/10.2139/ssrn.3811432>

Dubois L., Thomas D., « Investigation of process configurations for the post-combustion CO₂ capture applied to cement plant flue gases », *GHGT-15 Conference Proceedings*, available on [ssrn.com](https://www.ssrn.com), 3811331, 2021. <https://ssrn.com/abstract=3811331>