Publications from CLC GAS POWER project

1. *Effect of support on reactivity and selectivity of Ni-based oxygen carriers for Chemical-Looping Combustion*
   P. Gayán, L. F. de Diego, F. García-Labiano, J. Adánez, A. Abad, C. Dueso, Fuel 87 (2008) 2641-2650
2. *Methane combustion in a 500 Wth Chemical_looping Combustion system using an impregnated Ni-based oxygen carrier*
   J. Adánez, C. Dueso, L. F. de Diego, F. García-Labiano, P. Gayán, A. Abad, Energy & Fuels (2008) accepted sept 2008
3. *NiO/Al2O3 oxygen carriers for Chemical-Looping Combustion prepared by impregnation and deposition-precipitation methods.*
   P. Gayán, C. Dueso, A. Abad, J. Adánez, L. F. de Diego, F. García-Labiano, Fuel (2008) sent sept 2008
4. *Effect of fuel gas composition in Chemical-Looping Combustion with Ni-based oxygen carriers. Part 1. Fate of sulfur*
   F. García-Labiano, L. F. de Diego, P. Gayán, J. Adánez, A. Abad, C. Dueso, Ind. Eng. Chem. Res. (2008) sent sept 2008
5. *Effect of fuel gas composition in Chemical-Looping Combustion with Ni-based oxygen carriers. Part 2. Fate of light hydrocarbons*
   J. Adánez, C. Dueso, L. F. de Diego, F. García-Labiano, A. Abad, Ind. Eng. Chem. Res. (2008) sent sept 2008
6. *Syngas combustion in a 500 Wth Chemical-Looping Combustion system using an impregnated Ni-based oxygen carrier*
   C. Dueso, F. García-Labiano, J. Adánez, L. F. de Diego, P. Gayán, A. Abad, Fuel (2008) To be sent. Oct. 2008
7. *Reaction Kinetic of Ni-based oxygen carriers prepared by impregnation and spray-drying.*
   F. García-Labiano, A. Abad, P. Gayán, L. F. de Diego, C. Dueso, J. Adánez, (2008) In preparation
8. *Fuel reactor Modelling of a 120 kWth Chemical-Looping Combustion plant.*
   A. Abad, J. Adánez, P. Gayán, L. F. de Diego, F. García-Labiano, (2008) In preparation
9. *Characterization of chemical looping pilot plant performance via experimental determination of solids conversion*
   Kolbitsch, P., Bolhàr-Nordenkampf J., Pröll, T., Hofbauer, H., 2008, considered for submission to Energy&Fuels.
10. *Modeling of a 120kW chemical looping combustion reactor system using a NiO oxygen carrier*
    Kolbitsch, P., Pröll, T., Hofbauer H.,2008, accepted for publication in Chemical Engineering Science.
11. *Investigation of Different NiO/NiAl2O4 Particles as Oxygen Carriers for Chemical-Looping Combustion*
    Jerndal, E., Mattisson, T., and Lyngfelt, A., *accepted for publication in Energy & Fuels*
12. *Investigation of Ni-based mixed oxides in a 300 W chemical-looping combustor*
    Carl Linderholm, Erik Jerndal, Tobias Mattisson and Anders Lyngfelt, *submitted for publication*
13. *Long-term integrity testing of spray-dried particles in a 10 kW chemical-looping combustor using natural gas as fuel*
    Carl Linderholm, Tobias Mattisson and Anders Lyngfelt, *accepted for publication in Fuel*
14. *Investigation of NiO/NiAl2O4 Oxygen Carriers for Chemical-Looping Combustion Produced by Spray-Drying*
    Erik Jerndal, Ivo Thijs, Frans Snijkers, Tobias Mattisson, Anders Lyngfelt, *submitted for publication*
15. *High Reactivity and Mechanical Durability of NiO/NiAl2O4 and NiO/NiAl2O4/MgAl2O4 Oxygen Carrier Particles Used for Over 1000 Hours in a 10 kW CLC Reactor*
    Alexander Shulman, Carl Johan Linderholm, Tobias Mattisson, and Anders Lyngfelt, *submitted for publication*

Participation to international conferences

2007 International Conference on Coal Science and Technology (ICCS&T). Nothingham. United Kingdom. August 28th-31st 2007.

- Operation of a 500 W(th) Chemical_looping Combustion plant using syngas as fuel.
  F. García-Labiano, L. F. de Diego, J. Adánez, P. Gayán, A. Abad, C. Dueso, C.R. Forero

IX Reunión del Grupo Español del carbón (GEC) Teruel. Spain. 22-24 Octubre 2007

- Combustión de gas de síntesis con captura de CO2 con transportadores sólidos de oxígeno.
  C. Dueso, J. Adánez, F. García-Labiano, L. F. de Diego, P. Gayán, A. Abad
- Desarrollo de transportadores de oxígeno para la combustión de gases con captura de CO2.
  J. Adánez, L. F. de Diego, F. García-Labiano, , P. Gayán, A. Abad, C. Dueso, C.R. Forero, M. Ortiz

Circulating Fluidized Bed Technology IX, TuTech, Hamburg,.

- Comprehensive modelling tool for chemical looping based processes
Pröll, T., Bolhàr-Nordenkampf J., Kolbitsch, P., Hofbauer, H., 2008, in: Werther, J., et al. pp. 771-776
- Cold flow model study on a dual circulating fluidized bed (DCFB) system for chemical looping processes
Pröll, T., Rupanovits, K., Kolbitsch, P., Bolhàr-Nordenkampf J., Hofbauer, H., 2008, "", in: Werther, J., et al. pp. 783-788.
- Design of a chemical looping combustor using a dual circulating fluidized bed (DCFB) reactor system
Kolbitsch, P., Bolhàr-Nordenkampf J., Pröll, T., Hofbauer, H., 2008, "", in: Werther, J., et al., pp. 795-800

7th European Conference on Coal Research and its Applications. Cardiff. Wales. 3rd-5th September 2008.

- Chemical-Looping Combustion using Impregnated Ni-based oxygen carriers and syngas as fuel.
J. Adánez, C. Dueso, L. F. de Diego, F. García-Labiano, P. Gayán, A. Abad

9th International Conference on Greenhouse Gas Control Technologies. Washington DC, USA. 16th-20th november 2008

- Effect of gas impurities on the behavior of Ni-based oxygen carriers on Chemical-Looping Combustion
J. Adánez, F. García-Labiano, P. Gayán, L.F. de Diego, , C. Dueso, C. R. Forero
- Operating experience with chemical looping combustion in a 120kW dual circulating fluidized bed (DCFB) unit
Kolbitsch, P., Pröll, T., Bolhàr-Nordenkampf, J., Hofbauer, H., 2008,
- Performance of a NiO-based oxygen carrier for chemical looping combustion and reforming in a 120kW unit
Bolhàr-Nordenkampf, J., Kolbitsch, P., Pröll, T., Hofbauer, H., 2008,
- Natural minerals as oxygen carriers for chemical looping combustion in a dual circulating fluidized bed system
Pröll, T., Mattisson, T., Mayer, K., Bolhàr-Nordenkampf J., Kolbitsch, P., Lyngfelt, A., Hofbauer, H., 2008,
- Chemical-Looping Combustion CO2 Ready Gas Power
Mattisson, T., Adanez, J., Pröll, T., Kuusik, R., Beal, C., Assink, J., Snijkers, R., and Lyngfelt, A.,
- NiO particles with Ca and Mg based additives produced by spray-drying as oxygen carriers for chemical-looping combustion, Greenhouse Gas Control Technologies,
Erik Jerndal , Ivo Thijs, Frans Snijkers, Tobias Mattisson, Anders Lyngfelt , to be submitted
- High temperature behavior of NiO-based oxygen carriers for Chemical Looping Combustion.
Rein Kuusik, Andres Trikkel, Anders Lyngfelt, Tobias Mattisson.

AIChE anniversary meeting Nov. 2008.

-A dual circulating fluidized bed (DCFB) system for chemical looping combustion
Pröll, T., Kolbitsch, P., Bolhàr-Nordenkampf J., Hofbauer, H., 2008, Abstract submitted