

## Research outputs

### **Dielectric properties assessment during dynamic microwave-assisted carbon capture cyclic operations**

Fernandez Martin, C., Yassin, M. M., Baños, B. & Catala-Civera, J. M., 9 Sep 2019.

### **Microwave-assisted regeneration of solid adsorbents for CO<sub>2</sub> capture in post-combustion processes**

Fernandez Martin, C., Yassin, M. M., Afzal, W. & Anderson, J., 9 Sep 2019.

### **Microwave swing regeneration of aqueous monoethanolamine for post-combustion CO<sub>2</sub> capture**

McGurk, S. J., Martin, C. F., Brandani, S., Sweatman, M. B. & Fan, X., 15 Apr 2017, In : Applied Energy. 192, p. 126-133 8 p.

### **Wet impregnation of a commercial low cost silica using DETA for a fast post-combustion CO<sub>2</sub> capture process**

Martin, C. F., Sweatman, M. B., Brandani, S. & Fan, X., 1 Dec 2016, In : Applied Energy. 183, p. 1705-1721 17 p.

### **Intensification of CO<sub>2</sub> capture processes using microwave heating**

Fernandez Martin, C. & Fan, X., 26 Sep 2016, *3rd Global Congress on Microwave Energy Applications: Book of Abstracts*. Fernández, J. F. & Cabrera, J. M. (eds.). Spain: Polytechnic University of Cartagena

### **CO<sub>2</sub> adsorption using TiO<sub>2</sub> composite polymeric membranes: A kinetic study**

Hafeez, S., Fan, X., Hussain, A. & Martin, C. F., 1 Sep 2015, In : Journal of Environmental Sciences. 35, p. 163-171 9 p.

### **Dynamic cyclic performance of phenol-formaldehyde resin derived carbons for pre-combustion CO<sub>2</sub> capture: An experimental study**

Garcia, S., F. Martin, C., Pis, J. J., Rubiera, F. & Pevida, C., 2013, In : Energy Procedia. 37, p. 127-133 7 p., GHGT-11.

### **Precombustion CO<sub>2</sub> capture by means of phenol-formaldehyde resin-derived carbons: from equilibrium to dynamic conditions**

Martin, C. F., Garcia, S., Beneroso, D., Pis, J. J., Rubiera, F. & Pevida, C., 19 Sep 2012, In : Separation and Purification Technology. 98, p. 531-538 8 p.

### **Breakthrough adsorption study of a commercial activated carbon for pre-combustion CO<sub>2</sub> capture**

Garcia, S., Gil, M. V., Martin, C. F., Pis, J. J., Rubiera, F. & Pevida, C., 1 Jul 2011, In : Chemical Engineering Journal. 171, 2, p. 549-556 8 p.

### **Microporous phenol-formaldehyde resin-based adsorbents for pre-combustion CO<sub>2</sub> capture**

Martin, C. F., Plaza, M. G., Garcia, S., Pis, J. J., Rubiera, F. & Pevida, C., May 2011, In : Fuel. 90, 5, p. 2064-2072 9 p.

### **Hypercrosslinked organic polymer networks as potential adsorbents for pre-combustion CO<sub>2</sub> capture**

Martin, C. F., Stockel, E., Clowes, R., Adams, D. J., Cooper, A. I., Pis, J. J., Rubiera, F. & Pevida, C., 14 Apr 2011, In : Journal of Materials Chemistry. 21, 14, p. 5475-5483 9 p.

### **Doped phenol-formaldehyde resins as precursors for precombustion CO<sub>2</sub> capture adsorbents**

Martin, C. F., Garcia, S., Pis, J. J., Rubiera, F. & Pevida, C., 2011, In : Energy Procedia. 4, p. 1222-1227 6 p.

### **On the limits of CO<sub>2</sub> capture capacity of carbons**

Martin, C. F., Plaza, M. G., Pis, J. J., Rubiera, F., Pevida, C. & Centeno, T. A., 17 Aug 2010, In : Separation and Purification Technology. 74, 2, p. 225-229 5 p.

### **Developing almond shell-derived activated carbons as CO<sub>2</sub> adsorbents**

Plaza, M. G., Pevida, C., Martin, C. F., Feroso, J., Pis, J. J. & Rubiera, F., 29 Jan 2010, In : Separation and Purification Technology. 71, 1, p. 102-106 5 p.

### **Development of low-cost biomass-based adsorbents for postcombustion CO2 capture**

Plaza, M. G., Pevida, C., Arias, B., Feroso, J., Casal, M. D., Martin, C. F., Rubiera, F. & Pis, J. J., Dec 2009, In : Fuel. 88 , 12, p. 2442-2447 6 p.

### **Different approaches for the development of low-cost CO2 adsorbents**

Plaza, M. G., Pevida, C., Arias, B., Casal, M. D., Martin, C. F., Feroso, J., Rubiera, F. & Pis, J. J., Jun 2009, In : Journal of Environmental Engineering. 135, 6, p. 426-432 7 p.

## **Activities**

### **Supervision of Rutherford Fellow: Dr Ghulam Hussain**

Claudia Fernandez Martin (Examiner)

Jun 2018 → Mar 2019

### **Supervision of Rutherford Fellow: Dr Heriberto Diaz-Velazquez**

Claudia Fernandez Martin (Examiner)

Jun 2018 → Mar 2019

### **Supervision of Rutherford Fellow: Dr Yu Liu**

Claudia Fernandez Martin (Examiner)

Jun 2018 → Mar 2019

### **Chemical Engineering Journal (Journal)**

Claudia Fernandez Martin (Peer Review)

May 2018

### **Supervision of Rutherford Fellow: Dr Osiry Hernandez-Silva**

Claudia Fernandez Martin (Examiner)

May 2018 → Feb 2019

### **The Promising Application of Microwaves in Carbon Capture and Storage**

Claudia Fernandez Martin (Author)

10 Oct 2016

### **Energies (Journal)**

Claudia Fernandez Martin (Peer Review)

2016 → 2018

### **Engineering (Organisational unit)**

Claudia Fernandez Martin (Member)

1 Jan 2015 → Feb 2019

### **UK Carbon Capture and Storage Research Centre (UKCCSRC) (External organisation)**

Claudia Fernandez Martin (Member)

1 Jan 2015

### **Scottish Carbon Capture and Storage (SCCS) (External organisation)**

Claudia Fernandez Martin (Member)

Jan 2013