

Experimental data associated with the manuscript " Carbon Nanotube/PVA Aerogels Impregnated with PEI: Solid Adsorbents for CO<sub>2</sub> Capture " A. V. Gromov, A. Kulur, J.A.A. Gibson, E. Mangano, S. Brandani, E.E.B. Campbell accepted for publication in Sustainable Energy & Fuels .

The data are grouped in 2 excel files (labbook records and/or ASCII files imported to MS Excel 2013):

aerogel synthesis measurements raw data

CO<sub>2</sub> uptake TGA raw data

The file 'aerogel synthesis measurements raw data' contains 4 separate sheets under appropriate names: (i) the dimensions and physical characteristics of the selected synthesized aerogels, (ii) compression test data imported to excel sheet, (iii) electric test data – voltage/ current vs temperature data points imported to excel sheet for a series of various aerogels, (iv) the experimental data points of N<sub>2</sub> adsorption isotherms of selected aerogels;

The file 'CO<sub>2</sub> uptake TGA raw data' contains the experimental data points of TGA CO<sub>2</sub> uptakes for aerogels impregnated with PEI-600; file contains 13 separate sheets; each sheet contains the heading with the original file name, analysis date and the samples weight before regeneration and TGA experimental data points for sample regeneration in He and experimental data points for CO<sub>2</sub> sorption/desorption; each sheet is named according to the sample/analysis file name.