

(1) Dr Marie Edmonds

(2) Earth Sciences, University of Cambridge, Downing Street, Cambridge CB2 3EQ; Official Fellow, College Lecturer, Queens' College

(3) Cambridge CB3 9ET, United Kingdom

(4) History of employment:

Sep. 2007: Official Fellow, Queens' College

Jun. 2007: University Lecturer, Earth Sciences, University of Cambridge

Sep. 2006–May 2007: Reader, Environmental Sciences, University of East Anglia

Mar. 2004–Jul. 2006: Mendenhall Fellow, US Geological Survey, Hawaiian Volcano Observatory

Apr. 2001–Dec. 2003: Volcanologist, British Geological Survey, Montserrat Volcano Observatory

(5) degrees:

2001: PhD, Department of Earth Sciences, University of Cambridge, supervisor Prof David Pyle

1997: University of Cambridge, BA Natural Sciences; 1 class

(6) Based in the Earth Sciences Department at the University of Cambridge, I am engaged in establishing a world-leading research group. My research is broad and high impact; it concerns the role that magmatic volatiles play in magma genesis, storage and transport, eruption style and climate impact; and Solid Earth geochemical cycling and volatile abundance in the mantle. Twelve years post-PhD, I have more than 50 publications in the field and have supervised 10 PhD students. I have established an international reputation for my research, with regular invited talks, keynotes, and plenary lectures at conferences and enjoy a number of overseas and UK collaborations. I am an enthusiastic communicator of science and enjoy regular radio interviews, school visits and public lectures on the subject of volcanology and natural hazards.

(7) short list of key publications

Edmonds, M., Brett, A., M. Humphreys, A. Woods, R. A. Herd, in press. Magnetite-bubble aggregates at mixing interfaces in andesite magma bodies. Geological Society of London Special Publication.

Plail, M., M. Edmonds, M. C. S. Humphreys, J. Barclay and R. A. Herd, in press. Geochemical evidence for relict degassing pathways preserved in andesite. *Earth and Planetary Science Letters* 386, 21-33.

Sides, I., M. Edmonds, J. Maclennan, B. Houghton, D. Swanson, in press. Mantle geochemical control of eruption style at Kīlauea Volcano, Hawai'i. *Nature Geoscience*.

Edmonds, M., I. R. Sides, D. Swanson, C. Werner, R. S. Martin, T. A. Mather, R. A. Herd, R. L. Jones, M. I. Mead, G. Sawyer, T. Roberts, A. J. Sutton, T. Elias, 2013. Magma storage, transport and degassing during the 2008-10 summit eruption at Kīlauea Volcano, Hawai'i. *Geochimica Cosmochimica Acta* 123, 284-301.

Edmonds, M., M. Humphreys, E. Hauri, R. Herd, H. Rawson, R. Ledden, M. Plail, J. Barclay, A. Aiuppa, T. Christopher, G. Giudice, R. Guida, 2014. The role of pre-eruptive vapour in eruption style and longevity at Soufriere Hills Volcano. *Geological Society of London Memoir*, eds. G. Wadge, R. Robertson, B. Voight The eruption of Soufriere Hills Montserrat from 2000 to 2010.

McCormick, B. T., M. Edmonds, T. A. Mather, and S. A. Carn, 2012. First synoptic analysis of volcanic degassing in Papua New Guinea. *Geochemistry, Geophysics, Geosystems*, 13, Q03008, 21 PP, doi:10.1029/2011GC003945.

Wallace, P.J., M. Edmonds, 2011. The Sulfur Budget in Magmas: Evidence from Melt Inclusions, Submarine Glasses, and Volcanic Gas Emissions. *Reviews in Mineralogy and Geochemistry*, 73, 1, 215-246, DOI: 10.2138/rmg.2011.73.8.

Johnston, F.K.B., A.V. Turchyn, M. Edmonds, 2011. Decarbonation Efficiency in Subduction Zones: Implications for the Closure of the Tethys and warm Cretaceous climates. *Earth Planetary Science Letters* 303, 143–152.

Edmonds, M., A. Aiuppa, M. Humphreys, R. Moretti, G. Giudice, R. S. Martin, R. A. Herd, and T. Christopher, 2010. Excess volatiles supplied by mingling of mafic magma at an andesite arc volcano. *Geochem. Geophys. Geosyst.*, doi:10.1029/2009GC002781.

Edmonds, M., T. M. Gerlach and R. A. Herd, 2008, Halogen degassing from water-poor basaltic magma. *Chemical Geology*, doi:10.1016/j.chemgeo.2008.09.022.

Edmonds, M., 2008. New Geochemical Insights into Volcanic Degassing. *Philosophical Transactions of the Royal Society Series A*, 366, 4559-4579, doi: 10.1098/rsta.2008.0185.

Edmonds, M. and R.A. Herd, 2007. A volcanic degassing event at the explosive-effusive transition. *Geophysical Research Letters*, 34, L21310, doi:10.1029/2007GL031379.

Edmonds, M. and T. M. Gerlach, 2007. Vapor segregation and loss in basaltic melts. *Geology* 35, 8, 751-754.

Edmonds, M. and T. M. Gerlach, 2006. The airborne lava-seawater interaction plume at Kilauea Volcano, Hawai'i. *Earth and Planetary Science Letters*, 244, 83-96. [Featured in *Nature News and Views*, 440, 620, 30 March 2006 doi:10.1038/440620a], doi: 10.1016/j.epsl.2006.02.005.

Edmonds, M. and R. A. Herd, 2005. An inland-directed base surge generated by the explosive interaction of pyroclastic flows and seawater at Soufrière Hills volcano, Montserrat. *Geology*, 33, 4, 245-248, doi: 10.1130/G21166.1.

Herd, R. A., Edmonds, M., Bass, V. A., 2005. Catastrophic lava dome failure at Soufriere Hills Volcano, Montserrat, 12-13 July 2003. *Journal of Volcanology and Geothermal Research* 148, 234-252.

Edmonds, M., C. M. Oppenheimer, D. M. Pyle, R. A. Herd and G. Thompson, 2003. SO₂ emissions from Soufrière Hills Volcano and their relationship to conduit permeability, hydrothermal interaction and degassing regime. *Journal of Volcanology and Geothermal Research*, 124, 1-2, 23-43, doi: 10.1016/S0377-0273(03)00041-6.

Edmonds, M., C. Oppenheimer, D. Pyle and R. Herd, 2003. Rainwater and ash leachate analysis as proxies for plume chemistry at Soufrière Hills Volcano, Montserrat. In: C. Oppenheimer, D. Pyle and J. Barclay (eds) *Volcanic Degassing*. Geological Society of London Special Publication, 213, 203-218.

Edmonds, M., R A Herd, B Galle and C Oppenheimer, 2003. Automated, high time-resolution measurements of SO₂ flux at Soufrière Hills Volcano, Montserrat, West Indies, *Bulletin of Volcanology*, 65, 578-586, doi: 10.1007/s00445-003-0286-x.

Edmonds, M., D. M. Pyle and C. Oppenheimer, 2002. HCl emissions at Soufrière Hills Volcano, Montserrat, West Indies, during a second phase of dome building, November 1999 to September 2000, *Bulletin of Volcanology*, 64, 21-30, doi: 10.1007/s00445-001-0175-0.

Edmonds, M., D. M. Pyle and C. Oppenheimer, 2001. A model of degassing at Soufrière Hills Volcano, Montserrat, West Indies, based on geochemical data, *Earth and Planetary Science Letters*, 186, 159-173, 186, 159-173.

(8) honors

2013: Nomination Wager Medal, International Association of Volcanology and Chemistry Earth's Interior

2013: Award, William Smith Fund, Geological Society of London

2003: USGS Mendenhall Fellowship, Hawaiian Volcano Observatory

2003: Royal Society Dorothy Hodgkin Fellowship, UK

2003: NERC Fellowship, UK

1997: Mineralogical Society Prize for Mineralogy and Petrology

1996, 1997: Jesus College Scholarship Prizes

(9) professional society memberships

Member American Geophysical Union, IAVCEI, Geological Society of London, Geochemical Society