

# Professor Marie Edmonds

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Chair in Volcanology and Petrology, Earth Sciences, University of Cambridge

Vice President and Ron Oxburgh Fellow in Earth Sciences, Queens' College

## EDUCATION

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- **Earth Sciences Department, University of Cambridge**  
*PhD in Volcanology; Advisors Prof D Pyle and Prof C Oppenheimer* 1997-2002
- **University of Cambridge**  
*Bachelor of Arts, Geological Sciences; 1st class* 1994 - 1997
- **Plymouth High School for Girls, Plymouth, Devon**  
*10 GCSEs, grade A; 5 A-levels, grade A* 1987 - 1994

## CURRENT POSITIONS

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- University Professor**, University of Cambridge 2019 - present
- Vice President**, Queens' College 2020 - present
- Ron Oxburgh Fellow in Earth Sciences**, Queens' College 2019 - present

## PREVIOUS POSITIONS

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- University Reader**, University of Cambridge 2015 - 2019
- University Lecturer**, University of Cambridge 2007 - 2015
- Official Fellow and College Lecturer**, Queens' College 2007 - 2019
- Reader**, University of East Anglia 2006 - 2007
- Mendenhall Fellow**, United States Geological Survey 2004 - 2006
- Volcanologist**, British Geological Survey 2002 - 2003

## AWARDS AND HONOURS

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- **Plenary Lecture**  
*Goldschmidt Conference, Hawaii (given remotely during the Covid-19 pandemic)* 2020
- **Reginald Daly Lecture**  
*Bowen Series Lectures, American Geophysical Union* 2019
- **Thermo Fisher Scientific Annual Award**  
*Volcanic and Magmatic Studies Group* 2019
- **Wager Medal**  
*International Association Volcanology and Chemistry of the Earth's Interior* 2017
- **William Smith Fund**  
*Geological Society of London* 2013
- **Natural Environment Research Council Fellowship**  
*declined in favour of Mendenhall Fellowship* 2004
- **Royal Society Fellowship**  
*declined in favour of Mendenhall Fellowship* 2004
- **Jesus College Scholarship Prizes**  
*University of Cambridge* 1996, 1997
- **Wiltshire Prize**  
*University of Cambridge, for honours in 1B Geological Sciences* 1996

## INSTITUTIONAL POSITIONS

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|  |                |
|--|----------------|
| <i>Vice President, Queens' College</i>   | 2020 - 2025    |
| <i>Director of Research, Deputy Head of Department, Earth Sciences, University of Cambridge</i>  | 2019 - present |
| <i>Interim Director, NERC C-Clear Doctoral Training Partnership, University of Cambridge</i>     | 2019 - present |
| <i>Graduate Tutor, Queens' College</i>   | 2017 - present |
| <i>Deputy Senior Tutor, Queens' College</i>  | 2017 - 2020    |
| <i>Head of Field Safety, Earth Sciences, University of Cambridge</i>                             | 2012 - present |
| <i>Faculty Board and Degree Committee, Earth Sciences and Geography, University of Cambridge</i> | 2009 - 2015    |

## SERVICE AND EXTERNAL POSITIONS

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| <i>Editor, Geochemistry, Geophysics, Geosystems, American Geophysical Union</i>                    | 2018 - 2022    |
| <i>External Examiner, Geology Undergraduate Degree, Durham University</i>                          | 2017 - 2021    |
| <i>Chair, Panel A, Natural Environment Research Council</i>  | 2017 - 2021    |
| <i>Chair/co-Chair, Reservoirs and Fluxes Community, Deep Carbon Observatory</i>                    | 2014 - 2019    |
| <i>Chair, Synthesis Group, Deep Carbon Observatory</i>   | 2014 - 2019    |
| <i>Volcanology, Petrology Secretary, American Geophysical Union</i>                                | 2017 - 2019    |
| <i>Member VGP Section Awards Committee, American Geophysical Union</i>                             | 2016-2017      |
| <i>Member NERC Training Advisory Board and DTP-2 Working Group</i>                                 | 2016 - 2018    |
| <i>Chair, Ion Microprobe Facility steering committee Natural Environment Research Council</i>      | 2014 - 2018    |
| <i>Secretary for Science, Geological Society of London</i>   | 2014 - 2018    |
| <i>Member of Council, Geological Society of London</i>   | 2013 - 2018    |
| <i>Peer Review College, Natural Environment Research Council</i>                                   | 2014 - present |
| <i>Editorial Board, Journal of Volcanology and Geothermal Research</i>                             | 2014 - present |
| <i>Member, Ion Microprobe Facility steering committee, Natural Environment Research Council</i>    | 2012 - 2014    |
| <i>Member, Volcanic and Magmatic Studies Group committee</i>                                       | 2008 - 2012    |
| <i>Member, David Perlman Award Committee for Journalism in Science, American Geophysical Union</i> | 2004 - 2007    |
| <i>Member, Scientific Advisory Committee, Soufriere Hills Volcano eruption, Foreign Office</i>     | 2002 - 2004    |

## CURRENT RESEARCH GRANTS

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- **COMET: Centre for the Observation and Modeling of Tectonics and Volcanism**  
*Co-Investigator, NERC National Capability Funding; PI Wright, Leeds University* 2019-2021
- **VPlus: integrated remote sensing and modeling of volcanic plumes**  
*Co-Investigator, NERC Highlight Topic £1.8M, PI Schmidt, University of Cambridge* 2019-2022

## OTHER RECENT RESEARCH GRANTS

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- **Unmanned Aerial Vehicles in Volcanology**  
*Co-Investigator, Deep Carbon Observatory £180k, PI Liu, University of Cambridge* 2018-2019
- **Rift Volcanism: Past, Present and Future**  
*Non-lead Principal Investigator, Natural Environmental Research Council Large Grant £3.2M* 2014-2019
- **Synthesising the Discoveries of the Deep Carbon Observatory**  
*Principal Investigator, Deep Carbon Observatory £100k* 2018-2019
- **COMET: Centre for the Observation and Modeling of Tectonics and Volcanism**  
*Co-Investigator, NERC National Capability Funding; PI Wright, Leeds University* 2014-2019
- **Synthesising the Discoveries of the Deep Carbon Observatory**  
*Principal Investigator, Deep Carbon Observatory £75k* 2016-2018
- **Source of the sulfur plume from Holuhraun flood basalt eruption**  
*Co-Investigator, Natural Environmental Research Council Urgency Grant, £70k* 2015
- **Remote sensing of volcanic eruptions**  
*Principal Investigator, Isaac Newton Trust, University of Cambridge £30k* 2014

## SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL RESEARCHERS

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### Graduate students

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|---|----------------|
| <i>Olivia Hogg</i> , Natural Environment Research Council   | 2020 - present |
| <i>Kevin Wong</i> , Natural Environment Research Council, Leeds University                            | 2019 - present |
| <i>Nicholas Barber</i> , Gates Scholarship  | 2018 - present |
| <i>Penny Wieser</i> , Natural Environment Research Council  | 2017 - present |
| <i>Emily Mason</i> , Engineering and Physical Sciences Research Council                               | 2017 - present |
| <i>Julia Woitischek</i> , Natural Environment Research Council  | 2016 - 2020    |
| <i>Fiona Iddon</i> , Natural Environment Research Council, now Editor, Roy. Soc. Chem.                | 2015 - 2019    |
| <i>Euan Mutch</i> , Natural Environment Research Council, now PDRA U. Maryland                        | 2014 - 2019    |
| <i>Lois Salem</i> , Natural Environment Research Council, now NGO sector, London                      | 2013 - 2018    |
| <i>Svetlana Sibik</i> , Trinity Hall Studentship  | 2012 - 2016    |
| <i>David Neave</i> , Natural Environment Research Council, now tenure track, U. Manchester            | 2012 - 2016    |
| <i>Melissa Plail</i> , Natural Environment Research Council at UEA, now Editor, Nature Communications | 2010 - 2014    |
| <i>Brendan McCormick</i> , Natural Environment Research Council, now tenure track, U. Manchester      | 2009 - 2013    |
| <i>Isobel Sides</i> , Natural Environment Research Council, now Admin Officer, U. Oxford              | 2009 - 2013    |

Postdoctoral researchers

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| <i>Emma Liu</i> , Deep Carbon Observatory/Leverhulme Fellow, now lecturer UCL                    | 2016 - 2019 |
| <i>Brendan McCormick Kilbride</i> , NERC/Isaac Newton trust/BGS, now tenure track, U. Manchester | 2016 - 2019 |
| <i>Margaret Hartley</i> , NERC, now lecturer, U. Manchester                                      | 2011 - 2013 |
| <i>Jian Yang</i> , Isaac Newton trust  | 2010 - 2011 |

## TEACHING

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- **1A** - Natural Hazards and Energy (4 lectures)
- **1B** - Course Convener and Lecturer (9 lectures), Earth Sciences B course, Igneous Petrology and Volcanology
- **Part II** - Volcanology and Ore deposits (3 lectures), Part II Petrology core course
- **Part III** - Co-leader Spain field trip, Supervisor 1-4 MSci. research projects, Options courses O7: Volcanology (4 lectures and O17: Natural Hazards (3 lectures)

## ORGANISATION OF SCIENTIFIC MEETINGS

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- Scientific Organising Committee for the IAVCEI 2021 Rotorua, New Zealand, General Assembly
- Goldschmidt Conference Theme Chair: Volcanism in the Earth System, Hawaii 2020
- Convener, "Factory Earth" Fermor Meeting, Geological Society of London, 2017
- Theo Murphy Royal Society Meeting *Magma reservoir architecture and dynamics*, 2017
- Scientific Organising Committee, for the IAVCEI 2017 Portland General Assembly

## MEMBERSHIP OF SCIENTIFIC BODIES

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- International Association of Volcanology and Chemistry of the Earth's Interior
- Geochemical Society
- American Geophysical Union
- Fellow, Geological Society of London

## RECENT OUTREACH AND TRAINING

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| Cambridge Science Festival Public Lecture  | 2020       |
| Masterclass in Earth Sciences Lecture to year 12 students, University of Cambridge | 2018, 2019 |
| Christmas Lecture, Dartford Grammar School   | 2017       |
| ERF-funded Volcanology summer school, Memovolc, Santorini                          | 2015       |
| Pint of Science Festival, Cambridge  | 2015       |
| Lecture to Essex Rock and Mineral Society  | 2014       |
| ERF-funded Volcanology Summer School in Iceland                                    | 2013       |

## BOOKS, EDITORSHIPS AND POPULAR ARTICLES

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- **2020**, **M. Edmonds** Geochemical Monitoring of Volcanoes. In: Paolo Papale (ed.) Forecasting and planning for volcanic hazards, risks and disasters. Elsevier.
- **2019**, Suarez, C., **M. Edmonds**, A. Jones. Guest Editors, Catastrophic perturbations to Earth's Deep Carbon Cycle, Elements Magazine 15, 5.
- **2019**, Fischer, R., A. Aiuppa, **M. Edmonds**. Guest editors, Carbon Degassing Through Volcanoes and Active Tectonic Regions, 2017-2019. G-Cubed special theme.
- **2018**, **M. Edmonds**, K. Cashman, M. Holness, M. Jackson, Guest Editors, 2019. Special issue of the Philosophical Transactions of the Royal Society A, Following the Hooke Royal Society Meeting Magma reservoir architecture and dynamics, December 2017.
- **2017**, **M. Edmonds** and C. Manning (2017), Synthesizing our understanding of Earth's deep carbon., Eos, 98, <https://doi.org/10.1029/2017EO067913>. Published on 21 February 2017.
- **2017**, Kiseeva, K. and **M. Edmonds**, 2017. Guest Editors, Sulfides, Elements Magazine, 13, 2.
- **2014**, G. Zellmer, **M. Edmonds** and S. Straub (Guest Editors), Geological Society Special Publication. The Role of Volatiles in the Genesis, Evolution and Eruption of Arc Magmas, 410, 1.
- **2014**, B. Houghton, S. Vergnolle, **M. Edmonds**, J. Taddeucci and M. James. Hawaiian and Strombolian Eruptions. Encyclopaedia of Volcanoes, Second Edition, 2014
- **2014**, P. Wallace, **M. Edmonds**, T. Plank and E. Hauri. Volatiles in Magmas. Encyclopaedia of Volcanoes, Second Edition, 2014

## PUBLICATIONS IN PEER-REVIEWED JOURNALS

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Number of accepted publications 102, H-Index 36, Citations total 3827, PhD students/postdoctoral researchers.

### sub judice

**2020** *in review*. Liu et al. Aerial strategies advance volcanic gas measurements at inaccessible, strongly degassing volcanoes. *Science Advances*.

**2020** *in review*. Ilanko et al. Ultraviolet camera measurements of passive and explosive sulphur dioxide emissions at Yasur volcano, Vanuatu. *Remote Sensing*.

**2020** *in review*. Audetat, A., **M. Edmonds**. Magmatic-hydrothermal fluids. *Elements*.

**2020** *in review*., Matthews et al. Do olivine crystallisation temperatures faithfully record mantle temperature variability?

**2020** *in review*, Woitischek, J., M. Edmonds. A. W. Woods, Scientific Reports.

**2020**, *in review*. Taraczak, Z., M. Edmonds... J Pet.

**2020**, *in press*. Woitischek, J., A. W. Woods, M. Edmonds. Degassing at Yasur Volcano. Journal of Volcanology and Geothermal Research.

**2020**, *in review*. Ilyinskaya, E., M. Edmonds, et al. A self-cleaning tropospheric volcanic plume. Nature Geoscience.

**2020**, *in review*. Iddon, F. M. Edmonds\*. Volatile and trace element systematics of Main Ethiopian Rift magmas. Geochemistry, Geophysics, Geosystems.

**2020**, *in press*. Edmonds, M., Geochemical monitoring of volcanoes. In: Paolo Papale (ed.) Forecasting and planning for volcanic hazards, risks and disasters. Elsevier.

102. **2020**, Whitty, Rachel CW, E. Ilyinskaya, E. Mason, P. E. Wieser, E. J. Liu, A. Schmidt, T. Roberts, M. A. Pfeffer, B. Brooks, **Edmonds, Marie**, et al. Spatial and temporal variations in SO<sub>2</sub> and PM<sub>2.5</sub> levels around Kilauea Volcano, Hawai'i during 2007–2018. *Frontiers in Earth Science*, 8, 2020

101. **2020**, Wieser, Penny, F. Jenner, **Edmonds, Marie**, J. MacLennan, and B. Kunz. Chalcophile elements track the fate of sulfur at Kilauea volcano, Hawai'i. *Geochimica et Cosmochimica Acta*, 2020

100. **2020**, Wieser, Penny E, **Edmonds, Marie**, J. MacLennan, and J. Wheeler. Microstructural constraints on magmatic mushes under Kilauea volcano, Hawaii. *Nature Communications*, 11(1):1–14, 2020

99. **2020**, **Edmonds, Marie**, B. Tutolo, K. Iacovino, and Y. Moussallam. Magmatic carbon outgassing and uptake of CO<sub>2</sub> by alkaline waters. *American Mineralogist*, 105(1):28–34, 2020

98. **2019**, Wong, Kevin, Mason, Emily, S. Brune, East, Madison, **Edmonds, Marie**, and S. Zahirovic. Deep carbon cycling over the past 200 million years: a review of fluxes in different tectonic settings. *Frontiers in Earth Science*, 7:1–22, 2019
97. **2019**, Wieser, Penny E, **Edmonds, Marie**, J. Maclennan, F. E. Jenner, and B. E. Kunz. Crystal scavenging from mush piles recorded by melt inclusions. *Nature Communications*, 10(1):1–11, 2019
96. **2019**, C. A. Suarez, **Edmonds, Marie**, and A. P. Jones. Earth catastrophes and their impact on the carbon cycle. *Elements: An International Magazine of Mineralogy, Geochemistry, and Petrology*, 15(5):301–306, 2019
95. **2019**, Wieser, Penny E, Z. Vukmanovic, R. Kilian, E. Ringe, M. B. Holness, J. Maclennan, and **Edmonds, Marie**. To sink, swim, twin, or nucleate: A critical appraisal of crystal aggregation processes. *Geology*, 47(10):948–952, 2019
94. **2019**, C. Werner, T. P. Fischer, A. Aiuppa, **Edmonds, Marie**, C. Cardellini, S. Carn, G. Chiodini, E. Cottrell, M. Burton, H. Shinohara, and et al. *Carbon Dioxide Emissions from Subaerial Volcanic Regions*. Cambridge University Press, 2019
93. **2019**, Taracsák, Z, M. Hartley, R. Burgess, **Edmonds, M**, F. Iddon, and M. Longpré. High fluxes of deep volatiles from ocean island volcanoes: Insights from El Hierro, Canary Islands. *Geochimica et Cosmochimica Acta*, 258:19–36, 2019
92. **2019**, Mutch, Euan JF, J. Maclennan, O. Shorttle, **Edmonds, Marie**, and J. F. Rudge. Rapid transcrustal magma movement under Iceland. *Nature Geoscience*, 12(7):569–574, 2019
91. **2019**, Salem, LC, **Edmonds, Marie**, R. Corsaro, and J. Maclennan. Carbon dioxide in geochemically heterogeneous melt inclusions from Mount Etna, Italy. *Geochemistry, Geophysics, Geosystems*, 20(7):3150–3169, 2019
90. **2019**, Barth, Anna, **M. Edmonds**, and A. Woods. Valve-like dynamics of gas flow through a packed crystal mush and cyclic strombolian explosions. *Scientific reports*, 9(1):1–9, 2019
89. **2019**, Iddon, Fiona, C. Jackson, W. Hutchison, K. Fontijn, D. M. Pyle, T. A. Mather, G. Yirgu, and **Edmonds, Marie**. Mixing and crystal scavenging in the Main Ethiopian Rift revealed by trace element systematics in feldspars and glasses. *Geochemistry, Geophysics, Geosystems*, 20(1):230–259, 2019
88. **2019**, McCormick Kilbride, Brendan T., K. Mulina, G. Wadge, R. W. Johnson, I. Itikarai, and **Edmonds, Marie**. Multi-year satellite observations of sulfur dioxide gas emissions and lava extrusion at Bagana volcano, Papua New Guinea. *Frontiers in Earth Science*, 7:9, 2019
87. **2019**, **Edmonds, Marie**, K. V. Cashman, M. Holness, and M. Jackson. Architecture and dynamics of magma reservoirs. *Philosophical Transactions of the Royal Society A*, 377(2139):20180298, 2019
86. **2019**, K. V. Cashman and **Edmonds, Marie**. Mafic glass compositions: a record of magma storage conditions, mixing and ascent. *Philosophical Transactions of the Royal Society A*, 377(2139):20180004, 2019
85. **2019**, R. S. White, **Edmonds, Marie**, J. Maclennan, T. Greenfield, and T. Agustsdottir. Melt movement through the Icelandic crust. *Philosophical Transactions of the Royal Society A*, 377(2139):20180010, 2019
84. **2019**, Liu, Emma J, K. Wood, E. Mason, **Edmonds, Marie**, A. Aiuppa, G. Giudice, M. Bitetto, V. Francofonte, S. Burrow, T. Richardson, et al. Dynamics of outgassing and plume transport revealed by proximal Unmanned Aerial system (UAS) measurements at Volcán Villarrica, Chile. *Geochemistry, Geophysics, Geosystems*, 20(2):730–750, 2019
83. **2018**, **Edmonds, Marie**, T. A. Mather, and E. J. Liu. A distinct metal fingerprint in arc volcanic emissions. *Nature Geoscience*, 11(10):790–794, 2018

82. **2018, Edmonds, Marie** and A. W. Woods. Exsolved volatiles in magma reservoirs. *Journal of Volcanology and Geothermal Research*, 368:13–30, 2018
81. **2018, Hamlyn, Joanna**, T. Wright, R. Walters, C. Pagli, E. Sansosti, F. Casu, S. Pepe, **Edmonds, Marie**, B. M. Kilbride, D. Keir, et al. What causes subsidence following the 2011 eruption at Nabro (Eritrea)? *Progress in Earth and Planetary Science*, 5(1):31, 2018
80. **2018, Muller, Cyril**, J. Biggs, S. K. Ebmeier, P. Mothes, P. B. Palacios, P. Jarrín, **Edmonds, Marie**, and M. Ruiz. Temporal evolution of the magmatic system at Tungurahua Volcano, Ecuador, detected by geodetic observations. *Journal of Volcanology and Geothermal Research*, 368:63–72, 2018
79. **2018, Liu, EJ**, K. Cashman, A. Rust, and **Edmonds, Marie**. Insights into the dynamics of mafic magmatic-hydromagmatic eruptions from volatile degassing behaviour: The Hverfjall Fires, Iceland. *Journal of Volcanology and Geothermal Research*, 358:228–240, 2018
78. **2018, G. Wadge**, B. M. Kilbride, **Edmonds, M**, and R. Johnson. Persistent growth of a young andesite lava cone: Bagana volcano, Papua New Guinea. *Journal of Volcanology and Geothermal Research*, 356:304–315, 2018
77. **2018, Plail, M.**, **Edmonds, Marie**, A. W. Woods, J. Barclay, M. C. Humphreys, R. A. Herd, and T. Christopher. Mafic enclaves record syn-eruptive basalt intrusion and mixing. *Earth and Planetary Science Letters*, 484:30–40, 2018
76. **2017, Hartley, Margaret E**, O. Shorttle, J. Maclennan, Y. Moussallam, and **Edmonds, Marie**. Olivine-hosted melt inclusions as an archive of redox heterogeneity in magmatic systems. *Earth and Planetary Science Letters*, 479:192–205, 2017
75. **2017, E. Ilyinskaya**, A. Schmidt, T. A. Mather, F. D. Pope, C. Witham, P. Baxter, T. Jóhannsson, M. Pfeffer, S. Barsotti, **Edmonds, Marie**, et al. Understanding the environmental impacts of large fissure eruptions: Aerosol and gas emissions from the 2014–2015 Holuhraun eruption (Iceland). *Earth and Planetary Science Letters*, 472:309–322, 2017
74. **2017, Mason, Emily**, **Edmonds, Marie**, and A. V. Turchyn. Remobilization of crustal carbon may dominate volcanic arc emissions. *Science*, 357(6348):290–294, 2017
73. **2017, Neave, David A**, M. E. Hartley, J. Maclennan, **Edmonds, Marie**, and T. Thordarson. Volatile and light lithophile elements in high-anorthite plagioclase-hosted melt inclusions from Iceland. *Geochimica et Cosmochimica Acta*, 205:100–118, 2017
72. **2017, Edmonds, Marie** and P. J. Wallace. Volatiles and exsolved vapor in volcanic systems. *Elements*, 13(1):29–34, 2017
71. **2017, Edmonds, Marie** and T. A. Mather. Volcanic sulfides and outgassing. *Elements*, 13(2):105–110, 2017
70. **2017, Hughes, Ery C**, D. A. Neave, K. J. Dobson, P. J. Withers, and **Edmonds, Marie**. How to fragment peralkaline rhyolites: Observations on pumice using combined, multi-scale 2D and 3D imaging. *Journal of Volcanology and Geothermal Research*, 336:179–191, 2017
69. **2016, McCormick Kilbride, Brendan**, **Edmonds, Marie**, and J. Biggs. Observing eruptions of gas-rich compressible magmas from space. *Nature Communications*, 7(1):1–8, 2016
68. **2016, Y. Moussallam**, **Edmonds, Marie**, B. Scaillet, N. Peters, E. Gennaro, I. Sides, and C. Oppenheimer. The impact of degassing on the oxidation state of basaltic magmas: a case study of Kīlauea Volcano. *Earth and Planetary Science Letters*, 450:317–325, 2016
67. **2016, Hayer, CS**, G. Wadge, **Edmonds, Marie**, and T. Christopher. Sensitivity of OMI SO<sub>2</sub> measurements to variable eruptive behaviour at Soufrière Hills Volcano, Montserrat. *Journal of Volcanology and Geothermal Research*, 312:1–10, 2016

66. **2016**, Robertson, Elspeth, J. Biggs, **Edmonds, Marie**, L. Clor, T. P. Fischer, C. Vye-Brown, G. Kianji, W. Koros, and R. Kandie. Diffuse degassing at Longonot Volcano, Kenya: Implications for CO<sub>2</sub> flux in continental rifts. *Journal of Volcanology and Geothermal Research*, 327:208–222, 2016
65. **2016**, **Edmonds, Marie**, S. Kohn, E. Hauri, M. Humphreys, and M. Cassidy. Extensive, water-rich magma reservoir beneath southern Montserrat. *Lithos*, 252:216–233, 2016
64. **2016**, Hartley, Margaret E, D. J. Morgan, J. Maclennan, **Edmonds, Marie**, and T. Thordarson. Tracking timescales of short-term precursors to large basaltic fissure eruptions through Fe–Mg diffusion in olivine. *Earth and Planetary Science Letters*, 439:58–70, 2016
63. **2016**, Rae, Auriol SP, **Edmonds, Marie**, J. Maclennan, D. Morgan, B. Houghton, M. E. Hartley, and I. Sides. Timescales of magma transport and mixing at Kilauea Volcano, Hawai'i. *Geology*, 44(6):463–466, 2016
62. **2016**, M. C. Humphreys, **Edmonds, Marie**, and M. S. Klöcking. The validity of plagioclase-melt geothermometry for degassing-driven magma crystallization. *American Mineralogist*, 101:769–779, 2016
61. **2016**, B. F. Houghton, J. Taddeucci, D. Andronico, H. Gonnermann, M. Pistolesi, M. R. Patrick, T. R. Orr, D. Swanson, **Edmonds, Marie**, D. Gaudin, et al. Stronger or longer: Discriminating between Hawaiian and Strombolian eruption styles. *Geology*, 44(2):163–166, 2016
60. **2015**, **Edmonds, Marie**. Research focus: Flotation of magmatic minerals. *Geology*, 43(7):655–656, 2015
59. **2015**, **Edmonds, Marie**, J. Grattan, and S. Michnowicz. Volcanic Gases: Silent Killers. In *Observing the Volcano World*, pages 65–83. Springer, 2015
58. **2015**, Hartley, Margaret E, D. A. Neave, J. Maclennan, **Edmonds, Marie**, and T. Thordarson. Diffusive over-hydration of olivine-hosted melt inclusions. *Earth and Planetary Science Letters*, 425:168–178, 2015
57. **2015**, Cassidy, M, S. Watt, P. Talling, M. Palmer, **Edmonds, M**, M. Jutzeler, D. Wall-Palmer, M. Manga, M. Coussens, T. Gernon, et al. Rapid onset of mafic magmatism facilitated by volcanic edifice collapse. *Geophysical Research Letters*, 42(12):4778–4785, 2015
56. **2015**, O. Shorttle, Y. Moussallam, M. E. Hartley, J. Maclennan, **Edmonds, Marie**, and B. J. Murton. Fe-XANES analyses of Reykjanes Ridge basalts: Implications for oceanic crust's role in the solid Earth oxygen cycle. *Earth and Planetary Science Letters*, 427:272–285, 2015
55. **2015**, Sibik, Svetlana, **Edmonds, Marie**, J. Maclennan, and H. Svensen. Magmas erupted during the main pulse of Siberian Traps volcanism were volatile-poor. *Journal of Petrology*, 56(11):2089–2116, 2015
54. **2015**, T. Christopher, J. Blundy, K. Cashman, P. Cole, **Edmonds, Marie**, P. Smith, R. Sparks, and A. Stinton. Crustal-scale degassing due to magma system destabilization and magma-gas decoupling at Soufrière Hills Volcano, Montserrat. *Geochemistry, Geophysics, Geosystems*, 16(9):2797–2811, 2015
53. **2015**, M. C. Humphreys, **Edmonds, M**, T. Christopher, and V. Hards. Discussion on 'Magma storage region processes of the Soufrière Hills volcano, Montserrat', Geological Society, London, Memoirs, 39, 361–381. *Journal of the Geological Society*, 172(4):533–539, 2015
52. **2015**, **Edmonds, Marie**. Partitioning of light lithophile elements during basalt eruptions on earth and application to Martian shergottites. *Earth and Planetary Science Letters*, 411:142–150, 2015
51. **2015**, G. F. Zellmer, **Edmonds, Marie**, and S. M. Straub. Volatiles in subduction zone magmatism. *Geological Society, London, Special Publications*, 410(1):1–17, 2015
50. **2015**, Cassidy, Michael, **Edmonds, Marie**, S. F. Watt, M. R. Palmer, and T. M. Gernon. Origin of basalts by hybridization in andesite-dominated arcs. *Journal of Petrology*, 56(2):325–346, 2015

49. **2015, Edmonds, Marie**, I. Sides, and J. Maclennan. Insights into mixing, fractionation and degassing of primitive melts at Kilauea Volcano, Hawai'i. *Hawaiian Volcanoes: from Source to Surface*, pages 323–349, 2015
48. **2015, J. Taddeucci, Edmonds, Marie**, B. Houghton, M. R. James, and S. Vergnolle. Hawaiian and Strombolian eruptions. In *The Encyclopedia of Volcanoes*, pages 485–503. Academic Press, 2015
47. **2015, P. J. Wallace, T. Plank, Edmonds, Marie**, and E. H. Hauri. Volatiles in magmas. In *The Encyclopedia of Volcanoes*, pages 163–183. Academic Press, 2015
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