

# PROFESSOR THOMAS GERONON

## PUBLICATION HIGHLIGHTS

As of 31 May 2024, I have 83 peer reviewed publications, which have accrued 2,344 citations (h = 27). Currently, I have four papers under review and an additional three papers under revision.

**Gernon, T.M.**, Mills, B.J.W., Hincks, T.K., Merdith, A.S., Alcott, L.J., Rohling, E.J.R. & Palmer, M.R. *Solid Earth forcing of Mesozoic oceanic anoxic events*. **Nature Geoscience** (Accepted in Principle, in press, 2024).

**Gernon, T.M.**, Hincks, T.K., Brune, S., Braun, J., Jones, S.M., Keir, D., Cunningham, A. & Glerum, A., *Coevolution of craton margins and interiors during continental breakup*. **Nature** (Accepted in Principle, in press, 2024).

Russo, M., **Gernon, T.M.**<sup>‡</sup>, Santaguida, A. & Hincks, T.K., 2024. *Improving Earth science communication and accessibility with data sonification*. **Nature Reviews Earth & Environment** 5, 1–3; doi: [10.1038/s43017-023](https://doi.org/10.1038/s43017-023.‡Corresponding author). <sup>‡</sup>Corresponding author.

**Gernon, T.M.**, Jones, S.M., Brune, S., Hincks, T.K., Palmer, M.R., Schumacher, J.C., Primiceri, R.M., Field, M., Griffin, W.L., O'Reilly, S.Y., Keir, D., Spencer, C.J., Merdith, A. & Glerum, A., 2023. *Rift-induced disruption of cratonic keels drives kimberlite volcanism*. **Nature** 620, 344–350, doi: [10.1038/s41586-023-06193-3](https://doi.org/10.1038/s41586-023-06193-3). Article attracted an associated in-depth news feature in Science: Voosen, P., 2023. *Origin of diamond-bearing eruptions revealed*. **Science**, 381 (6656), 362–363, doi: [10.1126/science.adj9527](https://doi.org/10.1126/science.adj9527).

Spencer, C.J., Davies, N.S., **Gernon, T.M.**, Wang, X., McMahon, W.J., Morrell, T.R., Hincks, T.K., Puhfal, P.K., Brasier, A., Seraine, M., & Lu, G.M., 2022. *Composition of continental crust altered by the emergence of land plants*. **Nature Geoscience** 15 (9), 735–740, doi: [10.1038/s41561-022-00995-2](https://doi.org/10.1038/s41561-022-00995-2). Associated Perspective: Greber, N., 2022. *Plant fingerprints in the deep Earth*. **Nature Geoscience** 15, p. 685–686; doi: [10.1038/s41561-022-01022-0](https://doi.org/10.1038/s41561-022-01022-0); Editorial, *Plants rooted in rocks*. **Nature Geoscience** 15, p. 683; doi: [10.1038/s41561-022-01030-0](https://doi.org/10.1038/s41561-022-01030-0), and Research Highlight: Grocholski, B., 2022. *Geochemistry: Deep-rooted change*, **Science**, 378 (6615), 37–38, doi: [10.1126/science.adf1655](https://doi.org/10.1126/science.adf1655).

**Gernon, T.M.**, Barr, R., Fitton, J.G., Hincks, T.K., Longman, J., Merdith, A., Mitchell, R.N. & Palmer, M.R., 2022. *Mobilization of lithospheric mantle carbon during the Palaeocene-Eocene thermal maximum*. **Nature Geoscience** 15, 573–579, doi: [10.1038/s41561-022-00967-6](https://doi.org/10.1038/s41561-022-00967-6). Associated in-depth news feature: Voosen, P., 2022. *Hidden carbon layer may have sparked ancient bout of global warming*. **Science**, 377 (6601), 12–13, doi: [10.1126/science.add6369](https://doi.org/10.1126/science.add6369).

Longman, J., Mills, B.J.W., Manners, H.R., **Gernon, T.M.** & Palmer, M., 2021. *Late Ordovician climate change and extinctions driven by elevated volcanic nutrient supply*. **Nature Geoscience** 14, p. 924–929; doi: [10.1038/s41561-021-00855-5](https://doi.org/10.1038/s41561-021-00855-5).

**Gernon, T.M.**, Hincks, T.K., Merdith, A., Rohling, E.J., Palmer, M.R., Foster, G.L., Bataille, C.P. & Müller, R.D., 2021. *Global chemical weathering dominated by continental arcs since the mid-Palaeozoic*. **Nature Geoscience** 14, p. 690–696; doi: [10.1038/s41561-021-00806-0](https://doi.org/10.1038/s41561-021-00806-0).

Mitchell, R.N.<sup>‡</sup>, **Gernon, T.M.**<sup>‡</sup>, Cox, G.M., Nordsvan, A.R., Kirscher, U., Xuan, C., Liu, Y., Liu, X. & He, X., 2021. *Orbital forcing of ice sheets during snowball Earth*. **Nature Communications** 12, 4187; doi: [10.1038/s41467-021-24439](https://doi.org/10.1038/s41467-021-24439). <sup>‡</sup>Contributed equally.

**Gernon, T.M.**, 2020. *A sabbatical reboot*. **Science** 370 (6517), p. 738; doi: [10.1126/science.370.6517.738](https://doi.org/10.1126/science.370.6517.738).

Mazrouei, S., Ghent, R.R., Bottke, W.F., Parker, A.H. & **Gernon, T.M.**, 2019. *Earth and Moon impact flux increased at the end of the Paleozoic*, **Science** 363, p. 253–257; doi: [10.1126/science.aar4058](https://doi.org/10.1126/science.aar4058). Associated Perspective: Koeberl, C., 2019. *When Earth got pummeled*. **Science** 363 (6424), p. 224–225; doi: [10.1126/science.aav8480](https://doi.org/10.1126/science.aav8480); and News Feature: Voosen, P., 2019. *Moon's craters reveal recent spike in outer space impacts on Earth*, **Science**, doi: [10.1126/science.aaw7085](https://doi.org/10.1126/science.aaw7085).

Keller, C.B., Husson, J.M., Mitchell, R.N., Bottke, W.F., **Gernon, T.M.**, Boehnke, P., Bell, E.A., Swanson-Hysell, N.L. & Peters, S.E., 2019. *Neoproterozoic glacial origin of the Great Unconformity*. **Proceedings of the National Academy of Sciences** 116 (4), p. 1136–1145; doi: [10.1073/pnas.1804350116](https://doi.org/10.1073/pnas.1804350116). News and Views: Chakravorty, A. (2019), *Did global glaciation cause the Great Unconformity?* **Eos**, 100, doi: [10.1029/2019EO120289](https://doi.org/10.1029/2019EO120289).

- Hincks, T.K., Aspinall, W., Cooke, R. & Gernon, T.M.<sup>‡</sup>, 2018. *Oklahoma's induced seismicity strongly linked to wastewater injection depth*. **Science** 359, p. 1251–1255; doi: [10.1126/science.aap7911](https://doi.org/10.1126/science.aap7911). <sup>‡</sup>Corresponding author.
- Gernon, T.M., Hincks, T.K., Tyrrell, T., Rohling, E.J. & Palmer, M.R., 2016. *Snowball Earth ocean chemistry driven by extensive ridge volcanism during Rodinia breakup*. **Nature Geoscience** 9, p. 242–248; doi: [10.1038/ngeo2632](https://doi.org/10.1038/ngeo2632). Associated News & Views feature: Fairchild, I. J., 2016. *Ocean chemistry: Neoproterozoic glass-bleeding*. **Nature Geoscience** 9, p. 192–193; doi: [10.1038/ngeo2643](https://doi.org/10.1038/ngeo2643).
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- Gernon, T.M., Gilbertson, M.A., Sparks, R.S.J. & Field, M., 2008. *Gas-fluidisation in an experimental tapered bed: insights into processes in diverging volcanic conduits*. **Journal of Volcanology and Geothermal Research**, 174 (1–3), p. 49–56, doi: [10.1016/j.jvolgeores.2007.12.034](https://doi.org/10.1016/j.jvolgeores.2007.12.034). Paper featured in **Nature** (2008), Research Highlights, 451, p. 502, doi: [10.1038/451502a](https://doi.org/10.1038/451502a).

## PAPERS UNDER REVIEW

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- Watts, E.J., Rees, R., Gernon, T.M., Jonathan, P., Keir, D., Taylor, R.N., Siegburg, M., Chambers, E.L., Pagli, C., Cooper, M.J., Michalik, A., Milton, J.A., Hincks, T.K., Gebru, E.F., Ayele, A. & Abebe, B. *Afar triple junction fed by single asymmetric mantle upwelling*. **Nature Geoscience**, under consideration (2024).
- Merdith, A.S., Gernon, T.M., Maffre, P., Donnadiou, Y., Godd eris, Y., Longman, J., M uller, R.D., Mills, B.J.W. *Phanerozoic icehouse climates required multiple global cooling mechanisms*. **Science Advances**, under revision (2024).
- Longman, J., Gernon, T.M., Hincks, T.K., Panitz, S. & Palmer, M.R. *Intensified global volcanism during Late Pleistocene glacial strength shift*. **Nature Communications**, under revision (2024).
- Mitchell, R.N., Spencer, C.J., Kirscher, U., Li, Y., Gernon, T.M. & Liu, B. *Yellowstone Caldera magmatism pulsed by millennial climate cycles*. **Nature Communications**, under review (2024).
- Zhu, J., Zhang, Z., Gernon, T.M. and Deng, Y. *Migration of continental arcs dictates Earth's long-term climate state*. **Nature Geoscience**, under revision (2024).

## FURTHER PUBLICATIONS

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- Longman, J., Manners, H.R., Gernon, T.M., McManus, J., Palmer, M.R., Rowland, S.J. & Sutton, P.A., 2024. *Production and preservation of organic carbon in sub-seafloor tephra layers*. **Marine Chemistry** 258, 104334, doi: [10.1016/j.marchem.2023.104334](https://doi.org/10.1016/j.marchem.2023.104334).
- Gernon, T.M., Hincks, T.K., Tyrrell, T., Rohling, E.J. & Palmer, M.R., 2024. *Submarine volcanism along shallow ridges did not drive Cryogenian cap carbonate formation: COMMENT*. **Geology** (in press).
- Longman, J., Dunlea, A. G., Boning, P., Palmer, M.R., Gernon, T.M., McManus, J., Manners, H.R., Homoky, W.B., Pahnke, K., 2023. *Release of tephra-hosted iron during early diagenesis fingerprinted by iron isotopes*. **Earth and Planetary Science Letters** 605, 118016, doi: [10.1016/j.epsl.2023.118016](https://doi.org/10.1016/j.epsl.2023.118016).
- Siegburg, M., Gernon, T.M., Keir, D., Bull, J.M., Taylor, R.N., Watts, E.J., Greenfield, T. & Gebru, E.F., 2023. *Temporal clustering of fissural eruption across multiple segments within the Ethiopian Rift*. **Frontiers in Earth Science** 11, 1169635, doi: [10.3389/feart.2023.1169635](https://doi.org/10.3389/feart.2023.1169635).
- Rees, R., Gernon, T.M., Keir, D., Taylor, R.N. & Pagli, C., 2023. *The spatial and volcanic evolution of Ayelu, Abida and Yangudi volcanoes in the Northern Main Ethiopian Rift – Southern Afar, Ethiopia*. **Journal of Volcanology and Geothermal Research** 440, 107846, doi: [10.1016/j.jvolgeores.2023.107846](https://doi.org/10.1016/j.jvolgeores.2023.107846).

- Watts, E.J., Gernon, T.M., Taylor, R.N., Keir, D. & Pagli, C., 2023. *Magmatic evolution during proto-oceanic rifting at Alu, Dalafilla and Borale Volcanoes (Afar) determined by trace element and Sr-Nd-Pb isotope geochemistry*. *Lithos* 456–457, 107311, doi: [10.1016/j.lithos.2023.107311](https://doi.org/10.1016/j.lithos.2023.107311).
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- Mitchell, R.N., Brown, M., Gernon, T.M. & Spencer, C.J., 2022. *Evolving mantle convection from bottom-up to top-down*. *The Innovation* 3 (6), 100309; doi: [10.1016/j.xinn.2022.100309](https://doi.org/10.1016/j.xinn.2022.100309).
- Horn, E.L., Taylor, R.N., Gernon, T.M., Stock, M. & Farley, E.M.R., 2022. *Composition and petrology of a mush-bearing magma reservoir beneath Tenerife*. *Journal of Petrology* 63 (10), egac095, [10.1093/petrology/egac095](https://doi.org/10.1093/petrology/egac095).
- Longman, J., Palmer, M.R., Gernon, T.M., Manners, H.R. & Jones, M.T., 2022. *Subaerial volcanism is a potentially major contributor to oceanic iron and manganese cycles*. *Communications Earth & Environment* 3 (60), p. 1–8; doi: [10.1038/s43247-022-00389-7](https://doi.org/10.1038/s43247-022-00389-7).
- Callow, B., Falcon-Suarez, I., Bull, J.M., Gernon, T. M., Ruffell, S., Grippa, A. & Hurst, A., 2022. *Permeability heterogeneity of sandstone intrusion fluid escape systems, Panoche Hills, California: Implications for sedimentary basins globally*. *Sedimentology* 69, p. 2463–2485, doi: [10.1111/sed.12997](https://doi.org/10.1111/sed.12997).
- Lan, Z., Mitchell, R.N., Gernon, T. M. & Nordsvan, A.R., 2022. *Did an asteroid impact cause temporary warming during snowball Earth?* *Earth and Planetary Science Letters* 581, 117407, doi: [10.1016/j.epsl.2022.117407](https://doi.org/10.1016/j.epsl.2022.117407).
- Longman, J., Gernon, T.M., Palmer, M.R. & Manners, H.R., 2021. *Tephra deposition and bonding with reactive oxides enhances burial of organic carbon in the Bering Sea*. *Global Biogeochemical Cycles* 35 (11), e2021GB007140. doi: [10.1029/2021GB007140](https://doi.org/10.1029/2021GB007140).
- Longman, J., Gernon, T.M., Palmer, M.R., Jones, M.T., Stokke, E.W. & Svensen, H.H., 2021. *Marine diagenesis of tephra aided the Paleocene-Eocene Thermal Maximum termination*. *Earth and Planetary Science Letters* 571, 117101, doi: [10.1016/j.epsl.2021.117101](https://doi.org/10.1016/j.epsl.2021.117101).
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- Watts, E.J., Gernon, T.M., Taylor, R.N., Keir, D., Siegburg, M., Jarman, J., Pagli, C. & Gioncada, A., 2020. *Evolution of the Alu-Dalafilla and Borale volcanoes, Afar, Ethiopia*. *Journal of Volcanology and Geothermal Research* 408, 107094; doi: [10.1016/j.jvolgeores.2020.107094](https://doi.org/10.1016/j.jvolgeores.2020.107094).
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- Hicks, S., Verdon, J., Baptie, B., Luckett, R., Mildon, Z., Gernon, T.M., 2019. *A shallow earthquake swarm close to hydrocarbon activities: discriminating between natural and induced causes for the 2018–19 Surrey, UK earthquake sequence*. *Seismological Research Letters* 90 (6), p. 2095–2110; doi: [10.1785/0220190125](https://doi.org/10.1785/0220190125).

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- Elliott, H.A., **Gernon, T.M.**, Roberts, S., Boyce, A. & Hewson, C., 2019. *Diatremes act as fluid conduits for Zn-Pb mineralization in the SW Irish Orefield*. *Economic Geology* 114 (1), p. 117–125; doi: [10.5382/econ-geo.2019.4622](https://doi.org/10.5382/econ-geo.2019.4622).
- Gernon, T.M.**, Sparks, R.S.J., Field, M., Ogilvie-Harris, R., Schumacher, J., & Brooker, R., 2019. *Comment on: "Petrography of Snap Lake kimberlite dyke (Northwest Territories, Canada) and its interaction with country rock granitoids"*. *Journal of Petrology* 60 (3), 649–660 (egy118); doi: [10.1093/petrology/egy118](https://doi.org/10.1093/petrology/egy118).
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- Hatter, S., Palmer, M.R., **Gernon, T.M.**, Taylor, R.N., Cole, P.D., Barfod, D. & Coussens, M., 2018. *The evolution of the Silver Hills volcanic centre, and revised  $^{40}\text{Ar}/^{39}\text{Ar}$  geochronology of Montserrat, Lesser Antilles*. *Geochemistry, Geophysics, Geosystems* 19, p. 1–26; doi: [10.1002/2017GC007053](https://doi.org/10.1002/2017GC007053).
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## CONFERENCE PAPERS

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As of 31 May 2024, my science has been presented at 113 conference presentations in total, with 32 of these contributions as lead author; this represents a total of 66 different conferences.

Longman, J., **Gernon, T.M.**, Hincks, T., Panitz, S. & Palmer, M., 2024. A million-year reconstruction of global volcanism intensity: How does it link to glaciation? European Geophysical Union, EGU24-17827.

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Horn, E.L., Taylor, R.N., **Gernon, T.M.**, Schofield, K.E. & Stock, M.J., 2024. New insights into the magmatic systems feeding caldera-forming eruptions from juvenile nodules in lag breccias. Volcanic and Magmatic Studies Group (VMSG) Meeting, Jan 2024.

Rawlings, J., **Gernon, T.M.**, Humphreys-Williams, E., Stock, M. & Palmer, M.R., 2024. Constraining ascent velocities of diamond bearing kimberlite magmas using diffusion chronometry. Volcanic and Magmatic Studies Group (VMSG) Meeting, Jan 2024.

Watts, E.J., Rees, R., **Gernon, T.M.**, Jonathan, P., Keir, D., Taylor, R., Chambers, E.L. & Pagli, C., 2024. A far triple junction fed by single, heterogeneous mantle upwelling. Volcanic and Magmatic Studies Group (VMSG) Meeting, Jan 2024.

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**Gernon, T.M.**, Mills, B., Hincks, T.K., Merdith, A., Alcott, L., Rohling, E. & Palmer, M., 2023. Solid Earth forcing of oceanic anoxic events. Life and Planet Meeting, Geological Society of London, July 2023.

**Gernon, T.M.**, Jones, S.M., Brune, S., Hincks, T.K., Palmer, M.R., Schumacher, J.C., Primiceri, R.M., Field, M., Griffin, W.L., O'Reilly, S.Y., Keir, D., Spencer, C.J., Merdith, A. & Glerum, A., 2023. Kimberlite ascent by rift-driven disruption of cratonic mantle keels. Goldschmidt, Lyon, July 2023.

Illsley-Kemp, E., Jacobs, K., Wallace, L., Hincks, T. & **Gernon, T.M.**, 2023. The Silent Trigger: Do slow-slip earthquakes trigger volcanic unrest in the Taupō Volcanic Zone? IAVCEI 2023 Scientific Assembly, Contribution number 1230, Rotorua, New Zealand.

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- Horn, E.L., Taylor, R.N., **Gernon, T.M.** & Stock, M.J., 2021. Compositional evidence for dynamic, transcrustal mush systems at an ocean island volcano: The 289 ka Fasn a eruption, Tenerife. In AGU Fall Meeting Abstracts.
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- Gernon, T.M.**, Hincks, T.K., Aspinall, W. & Cooke, R., 2021. Machine learning of seismicity induced by hydraulic fracturing. Invited keynote speaker, 3rd Institute of Mathematics and OR Society Conference on Mathematics of Operational Research (virtual).
- Gernon, T.M.**, 2021. The role of volcanism in shaping Neoproterozoic snowball Earth. Invited keynote speaker, Volcanic and Magmatic Studies Group Meeting, Geological Society of London (virtual assembly).
- Watts, E.J., **Gernon, T.M.**, Taylor, R.N., Keir, D., Siegburg, M., Jarmin, J., Pagli, C. & Gioncada, A., 2021. Evolution of the Alu-Dalafilla and Borale Volcanoes, Afar. EGU General Assembly (virtual assembly) (EGU21-7898), <https://doi.org/10.5194/egusphere-egu21-7898>.
- Watts, E.J., **Gernon, T.M.**, Taylor, R.N., Keir, D., Siegburg, M., Pagli, C. & Gioncada, A., 2021. Evolution of the Alu-Dalafilla and Borale Volcanoes, Afar, Ethiopia. Volcanic and Magmatic Studies Group Meeting, Geological Society of London (virtual assembly).
- Rees, R., **Gernon, T.M.** & Keir, D., 2021. Volcanic and geochemical evolution of the Northern Main Ethiopian Rift (NMER) in East Africa: volcanism in the NMER-Afar transition zone. Volcanic and Magmatic Studies Group Meeting, Geological Society of London (virtual assembly).
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- Gernon, T.M.**, Hincks, T.K., Tyrrell, T., Rohling, E.J. & Palmer, M.R., 2017. *'Snowball Earth' ocean chemistry driven by weathering of a shallow ridge system during Rodinia breakup.* **Invited keynote speaker**, Goldschmidt, Paris.
- Taylor, R.N., Farley, E.M.R., Davilla-Harris, P., Branney, M. & **Gernon, T.M.**, 2017. *Pulsing evolution of a hotspot: constraining the scale of mantle heterogeneities.* Goldschmidt, Paris, 2017.
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- Gernon, T.M.**, Hincks, T.K., Tyrrell, T., Rohling, E.J. & Palmer, M.R., 2016. *'Snowball Earth' ocean chemistry driven by extensive ridge volcanism during Rodinia breakup.* **Invited keynote speaker**, Sprigg Symposium, Australian Earth Science Convention (AESC), Adelaide.
- Hatter, S.J., Palmer, M.R., Taylor, R.N. & **Gernon, T.M.**, 2016. *Geochemical evolution of Montserrat and Guadeloupe (Lesser Antilles Arc): investigating the role of subducting oceanic basement ridges.* Volcanic and Magmatic Studies Group Meeting, Trinity College Dublin.
- Emeana, J., Dix, J., **Gernon, T.M.**, Thompson, C.E., Henstock, T., & Pilgrim, J., 2015. *Physical modelling of the effects of sediment thermal regimes on subsea HV cable performance.* AGU Fall Meeting, San Francisco.

- Illsley-Kemp, F, Keir, D., Bull, J., Ayele, A., Hammond, J., Kendall, J.M., Gallacher, R., **Gernon, T.M.** & Goitom, B., 2015. *Magmatic plumbing at an incipient oceanic spreading centre: Evidence from local earthquake data in Northern Afar*. AGU Fall Meeting, San Francisco.
- Gernon, T.M.**, Hincks, T.K., Tyrrell, T., Rohling, E.J. & Palmer, M.R., 2015. 'Snowball Earth' ocean chemistry driven by explosive unzipping of Rodinia. Earth's Uninterrupted Habitability, Geological Society of London.
- Cevatoglu, M., Bull, J.M., Vardy, M.E., Wright, I.C. & **Gernon, T.M.**, 2015. *First controlled sub-seabed CO<sub>2</sub> release experiment: qualitative and quantitative analysis of high-resolution seismic reflection data*. IEAGHG The Risk Management and Environmental Research Meeting, Southampton.
- Manners, H.R., Palmer, M.R., **Gernon, T.M.**, Sutton, P.A., Rowland, S.J. & McManus, J., 2015. *The Role of Marine Diagenesis of Tephra in the Carbon Cycle*. International Meeting on Organic Geochemistry, Prague, Czech Republic.
- Siegburg, M., **Gernon, T.M.**, Bull, J.M., Keir, D.K., Nixon, C.W., Taylor, R.N. & Abebe, B., 2015. *Tectono-magmatic interaction at the Boset Volcanic Complex in the Main Ethiopian Rift*. British Geophysical Association, Postgraduate Research in Progress Meeting, Southampton.
- Illsley-Kemp, F, Keir, D., Bull, J., Ayele, A., Hammond, J., Kendall, J.M., Gallacher, R., **Gernon, T.M.**, & Goitom, B., in prep. *Seismicity of an incipient oceanic spreading centre in Northern Afar*. British Geophysical Association, Postgraduate Research in Progress Meeting, Southampton.
- Emeana, J., Dix, J., Henstock, T., **Gernon, T.M.**, Thompson, C.E. & Pilgrim, J., 2015. *The thermal regime around buried submarine high voltage cables*. British Geophysical Association, Postgraduate Research in Progress Meeting, Southampton.
- Hughes, T.J., Henstock, T.J., Dix, J.K., Pilgrim, J.A., **Gernon, T.M.** & Thompson, C.E.L., 2015. *Influence of sediment permeability on typical temperature response times of submarine high voltage cables*. British Geophysical Association, Postgraduate Research in Progress Meeting, Southampton.
- Hatter, S.J., Palmer, M.R. & **Gernon, T.M.**, 2015. *Discovery of a 2.5Ma, VEI-5 Plinian eruption on Guadeloupe*. Goldschmidt Conference, Prague, Czech Republic (best student poster prize).
- Hatter, S.J., Palmer, M.R., **Gernon, T.M.** & Taylor, R.N., 2015. *Marine sediments as an archive of arc volcanic history: Montserrat and Guadeloupe, Lesser Antilles*. IUGG General Assembly, Prague, Czech Republic.
- Palmer, M.R., Manners, H.R., **Gernon, T.M.**, Sutton, P.A. & Rowland, S.J., 2015. *Selective preservation of amides in marine tephra layers*. Goldschmidt Conference, Prague, Czech Republic.
- Hughes, T.J., Henstock, T.J., Dix, J.K., Pilgrim, J.A., **Gernon, T.M.** & Thompson, C.E.L., 2015. *Thermal ratings of submarine HV cables informed by environmental considerations*. Jicable-9th International Conference on Insulated Power Cables, Versailles, France.
- Illsley-Kemp, F, Keir, D., Bull, J., **Gernon, T.M.**, Hammond, J., Kendall, J.M., Goitom, B., & Ayele, A., 2015. *Magmatic plumbing at an incipient oceanic spreading centre: Evidence from local earthquake data in Northern Afar*. History of Seismology Meeting: From Hooke to Helioseismology, University of Leicester.
- Gernon, T.M.**, Keir, D., Bull, J. & Taylor, R.N., 2015. *Development of the Boset-Bericha volcanic complex, northern Main Ethiopian Rift*. Volcanic and Magmatic Studies Group Meeting, Norwich, UK.
- Taylor, R.N., **Gernon, T.M.**, Stock, M.J. & Brown, R.J., 2015. *The mixing, evolution and eruption history of a disaggregated magma reservoir*. Volcanic and Magmatic Studies Group Meeting, Norwich, UK.
- Hatter, S.J., Palmer, M.R., **Gernon, T.M.** & Taylor, R.N., 2015. *Marine sediments as an archive of arc volcanic history, Montserrat*. Volcanic and Magmatic Studies Group Meeting, Norwich, UK.
- Coussens, M., Talling, P., Watt, S., Cassidy, M., Wall-Palmer, D., **Gernon, T.M.** & Palmer, M.R., 2015. *Investigating the long-term evolution of an island-arc volcano*. Volcanic and Magmatic Studies Group Meeting, Norwich, UK.
- Coussens, M., Talling, P., Watt, S., Cassidy, M., Wall-Palmer, D., Jutzeler, M., **Gernon, T.M.** & Palmer, M.R., 2015. *Investigating the long-term evolution of an island-arc volcano*. Martinique volcanology conference.

- Gernon, T.M.**, 2014. *Diamond eruptions*. **Invited keynote speaker**, Mineral Deposits Studies Group Meeting, Southampton, UK. (**Gernon, T.M.**, 2014. *Diamond eruptions*, Applied Earth Science (Trans. Inst. Min. Metall. B), 124(1), p. 35–36).
- Elliott, H.A., **Gernon, T.M.**, Roberts, S., Hewson, C. & Boyce, A., 2014. *Diatreme volcanism and Pb-Zn mineralisation in the Limerick district of the Irish orefield*. Mineral Deposits Studies Group Meeting, Southampton, UK. (Elliott, H.A., **Gernon, T.M.**, Roberts, S., Hewson, C. & Boyce, A., 2015. *Diatreme volcanism and Pb-Zn mineralisation in the Limerick district of the Irish orefield*, Applied Earth Science (Trans. Inst. Min. Metall. B), 124(1), p. 32–33). Rio Tinto Prize for best talk.
- Gernon, T.M.**, 2014. *Volcanic venting and the eruption of alkaline igneous rocks*. Geophysical Research Abstracts, Vol. 16, EGU General Assembly, Abstract EGU2014-3003.
- Gernon, T.M.** & Gilbertson, M.A., 2014. *Segregation of particles in a tapered fluidized bed with implications for pyroclastic volcanism*. Geophysical Research Abstracts, Vol. 16, EGU General Assembly, Abstract EGU2014-10505.
- Hughes, T.J., Henstock, T.J., Dix, J.K., Pilgrim, J.A. & **Gernon, T.M.**, 2014. *Heat Transfer in HV Cable Systems Under the Seafloor*. 7th UHVnet (Universities High Voltage Network) Colloquium.
- Emeana, C.J., Dix, J.K., Henstock, T.J., **Gernon, T.M.**, Pilgrim, J.A. & Thompson, C.E.L., 2014. *Sediment thermal properties and the implication for the performance of sub-seabed HV cables*. 7th UHVnet (Universities High Voltage Network) Colloquium.
- Coussens, M., Talling, P., Watt, S., **Gernon, T.M.** & Palmer, M., 2014. *Investigating the long term evolution of an island arc volcano*. Volcanic and Magmatic Studies Group Meeting, Edinburgh, UK.
- Elliott, H.A.L., **Gernon, T.M.**, Roberts, S., & P.B. Redmond, 2013. *Facilitation of Pb-Zn mineralisation by diatremes in the Irish Orefield?* Eos Trans. AGU, Fall Suppl., Abstract V41D-2833.
- Cevatoglu, M., Bull, J.M., Vardy, M.E., Wright, I.C. & **Gernon, T.M.**, 2013. *First controlled sub-seabed CO<sub>2</sub> release experiment: Insights into gas migration pathways and impacts on sediment physical properties*. Eos Trans. AGU, Fall Suppl., Abstract OS11E-05.
- Cevatoglu, M., Bull, J.M., Vardy, M.E., Wright, I.C. & **Gernon, T.M.**, 2013. *First controlled sub-seabed CO<sub>2</sub> release experiment: Insights into gas migration pathways and impacts on sediment physical properties*. British Geophysical Association, Postgraduate Research in Progress Meeting, Cambridge.
- Hughes, T.J., Henstock, T.J., Pilgrim, J.A., Dix, J.K., **Gernon, T.M.**, 2013. *Environmental Controls on the State of HV cables under the seafloor*. HubNet Smartgrids Symposium, Cardiff.
- Palmer, M.R., **Gernon, T.M.** & SHIPBOARD SCIENTISTS OF IODP LEG 340, 2013. *The role of tephra diagenesis in the carbon cycle*. Goldschmidt 2013 Conference Abstracts, Mineralogical Magazine 77 (5), p. 1915, doi: 10.1180/minmag.2013.077.5.16.
- Johnson, P., Inglis, E., Marchant, I., Cassidy, M., Palmer, M.R., Talling, P.J., **Gernon, T.M.**, Watt, S. & SHIPBOARD SCIENTISTS OF IODP LEG 340, 2013. *Marine sediments as an archive of the evolution of volcanism on Montserrat*. Goldschmidt 2013 Conference Abstracts, Mineralogical Magazine 77 (5), p. 1400, doi: 10.1180/minmag.2013.077.5.10.
- Gernon, T.M.**, Wood, M., Brown, R.J., Medlin, C., Tait, M. & Hincks, T.K., 2013. *Pyroclastic granulation in explosive volcanic eruptions*. Volcanic and Magmatic Studies Group Meeting, Bristol, UK.
- Stock, M.J., Taylor, R.N. & **Gernon, T.M.**, 2013. *Triggering of major volcanic eruptions recorded by actively forming cumulates on Tenerife*. Volcanic and Magmatic Studies Group Meeting, Bristol, UK.
- Elliott, H.A., **Gernon, T.M.**, Roberts, S. & Redmond, P., 2013. *Diatreme volcanism facilitating Pb-Zn mineralisation in the Irish Orefield?* Volcanic and Magmatic Studies Group Meeting, Bristol, UK (awarded the VMSG Bob Hunter prize for best oral presentation).
- Brooker, R.A., Ogilvie-Harris, R.C., **Gernon, T.M.**, Sparks, R.S.J. & Field, M., 2013. *The Snap Lake kimberlite; a true composite intrusion*. Volcanic and Magmatic Studies Group Meeting, Bristol, UK.
- Gernon, T.M.**, Brown, R.J., Tait, M. & Hincks, T.K., 2012. *The origin of pelletal lapilli in explosive kimberlite eruptions*. 10th International Kimberlite Conference, Bangalore, India, 10IKC-A-00372.

- Sparks, R.S.J., Brown, R.J., Field, M., **Gernon, T.M.** & Kavanagh J., 2012. *Dynamics of kimberlite magma ascent, intrusion and eruption*. 10th International Kimberlite Conference, Bangalore, India, 10IKC-A-00368.
- Gernon, T.M.**, Field, M., Sparks, R.S.J. & Ogilvie-Harris, R.C., 2012. *Emplacement of the Snap Lake kimberlite intrusion, NW Territories, Arctic Canada*. 10th International Kimberlite Conference, Bangalore, India, 10IKC-A-00278.
- Stock, M.J., Taylor, R.N. & **Gernon, T.M.**, 2012. *Major Plinian eruptions on Tenerife: An insight into driving mechanisms from cumulate nodules*. Volcanic and Magmatic Studies Group Meeting, Durham, UK.
- Elliott, H.A., **Gernon, T.M.**, Roberts, S. & Redmond, P., 2012. *Pb-Zn mineralization within the Limerick Basin (SW Ireland): A role for volcanism?* Mineral Deposits Studies Group Meeting, Cardiff, UK.
- Gernon, T.M.**, 2011. *Kimberlite volcanology*. **Invited keynote speaker**, International Diamond School, University of Padua, Bressanone-Brixen, Italian Alps.
- Gernon, T.M.**, Field, M., Sparks, R.S.J. & Ogilvie-Harris, R.C., 2010. *Emplacement of crystal-rich magmas: insights from the Snap Lake kimberlite intrusion (NW Territories, Canada)*. Geophysical Research Abstracts, Vol. 12, EGU General Assembly, Abstract EGU2010-12326.
- Gernon, T.M.** & Hincks, T.K., 2010. *Depositional processes of the basaltic Elie Ness diatreme, East Fife, Scotland*. Geophysical Research Abstracts, Vol. 12, EGU General Assembly, Abstract EGU2010-11710.
- Gernon, T.M.**, Field, M., Sparks, R.S.J. & Ogilvie-Harris, R.C., 2010. *Emplacement of crystal-rich magmas: insights from the Snap Lake kimberlite intrusion (NW Territories, Canada)*. British Geophysical Association meeting, "Magma emplacement and storage in the Earth's crust", New Advances in Geophysics, Geological Society of London.
- Gernon, T.M.**, Gilbertson, M.A. & Sparks, R.S.J., 2010. *Particle segregation in tapered fluidized beds*. 13th International Conference on Fluidization - New Paradigm in Fluidization Engineering, Gyeong-ju, Korea.
- Fontana, G. P., MacNiocaill, C., Brown, R.J., Sparks, R.S.J., Field, M. & **Gernon, T.M.**, 2009. *Palaeomagnetic emplacement temperature determinations of pyroclastic and volcanoclastic deposits in southern African kimberlite pipes*. Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract V22B-2068.
- Gernon, T.M.**, Sparks, R.S.J., Field, M. & Ogilvie-Harris, R.C., 2009. *Geological constraints on the emplacement of the Snap Lake kimberlite dyke, NW Territories, Arctic Canada*. Eos Trans. AGU, 90(22), Jt. Assem. Suppl., Abstract V33D-02.
- Ogilvie-Harris, R., Sparks, R.S.J., Field, M. & **Gernon, T.M.**, 2009. *The Geochemistry of the Snap Lake kimberlite dyke, NW Territories, Canada: Phlogopite and Spinel*. Eos Trans. AGU, 90(22), Jt. Assem. Suppl., Abstract V33D-01.
- Fontana, G. P., MacNiocaill, C., Brown, R.J., Sparks, R.S.J., Field, M. & **Gernon, T.M.**, 2009. *Emplacement temperatures of pyroclastic and volcanoclastic deposits in kimberlite pipes in southern Africa: New constraints from palaeomagnetic measurements*. Eos Trans. AGU, 90(22), Jt. Assem. Suppl., Abstract V31F-07.
- Gernon, T.M.**, Field, M. & Sparks, R.S.J., 2009. *Geological constraints on the emplacement of the Snap Lake kimberlite dyke, NW Territories, Arctic Canada*. Irish Geological Research Meeting, Dublin, Ireland.
- Fontana, G., **Gernon, T.M.**, Mac Niocaill, C., Brown, R.J., Sparks, R.S.J. & Field, M., 2009. *Identification of kimberlite pyroclastic flow deposits using thermal remnant magnetism*. 43<sup>rd</sup> Volcanic and Magmatic Studies Group Meeting, Bournemouth, UK.
- Gernon, T.M.**, Sparks, R.S.J., Field, M. & Gilbertson, M.A., 2008. *The role of gas-fluidisation in the formation of massive volcanoclastic kimberlite*. 9<sup>th</sup> International Kimberlite Conference, Frankfurt, Germany, 9IKC-A-00175.
- Tait, M.A., Brown, R.J., **Gernon, T.M.** & Medlin, C.C., 2008. *Internal Architecture of a Large Kimberlitic Fissure Volcano: The Cambrian Venetia K01 Kimberlite Pipe, Limpopo, RSA*. 9<sup>th</sup> IAVCEI (International Association of Volcanology and Chemistry of the Earth's Interior) General Assembly, Reykjavík, Iceland.

- Gernon, T.M.**, Field, M., Sparks, R.S.J., Brown, R.J., Fontana, G. & Mac Niocaill, C., 2008. *Pyroclastic flow deposits from a kimberlite eruption: Orapa South Pipe, Republic of Botswana*. 9<sup>th</sup> International Kimberlite Conference, Frankfurt, Germany, 9IKC-A-00177.
- Field, M., **Gernon, T.M.**, Walters, A., Mogg, T. & Sparks, R.S.J., 2008. *Olivine grain size variations in the Snap Lake kimberlite sheet, Canada: Implications for kimberlite melt behaviour and diamond size distributions*. 9<sup>th</sup> International Kimberlite Conference, Frankfurt, Germany, 9IKC-A-00287.
- Gernon, T.M.**, Sparks, R.S.J., Gilbertson, M.A. & Field, M., 2008. *Fluidisation in flared containers with applications to kimberlite geology*. 42<sup>nd</sup> Volcanic and Magmatic Studies Group Meeting, Dublin, Ireland.
- Gernon, T.M.**, Gilbertson, M.A., Sparks, R.S.J. & Field, M., 2007. *Experimental constraints on the role of fluidisation in kimberlite emplacement*. IUGG (International Union of Geodesy and Geophysics) XXIV, Perugia, Italy.
- Gernon, T.M.**, Gilbertson, M.A., Sparks, R.S.J. & Field, M., 2007. *Tapered Fluidized Beds and the Role of Fluidization in Mineral Emplacement*. 12th International Conference on Fluidization - New Horizons in Fluidization Engineering, Vancouver, Canada.
- Brown, R.J., **Gernon, T.M.** & Tshutlhedi, J., 2006. *Insights into the eruption of the Jwaneng Centre Lobe kimberlite pipe*. 8<sup>th</sup> International Kimberlite Conference (IAVCEI), Emplacement Workshop, Saskatoon, Canada.
- Gernon, T.M.**, Gilbertson, M.A., Sparks, R.S.J., Walters, A. & Field, M., 2006. *Gas-solid fluidisation in an experimental tapered bed: insights into processes in diverging volcanic conduits*. 8<sup>th</sup> International Kimberlite Conference (IAVCEI), Emplacement Workshop, Saskatoon, Canada.
- Gernon, T.M.**, Sparks, R.S.J., Brown, R.J. & Field, M., 2006. *Gas-segregation pipes in kimberlite: evidence for fluidisation at Orapa South Pipe, Botswana*. 8<sup>th</sup> International Kimberlite Conference (IAVCEI), Emplacement Workshop, Saskatoon, Canada.
- Gernon, T.M.**, Gilbertson, M.A., Sparks, R.S.J., Walters, A. & Field, M., 2006. *Fluidization and its potential role in the emplacement of kimberlite pipe-fills*. Volcanic and Magmatic Studies Group Meeting, Leeds, UK.
- Sparks, R.S.J., Brown, R.J., Field, M. & **Gernon, T.M.** et al., 2006. *Dynamical constraints on kimberlite volcanism*. 8<sup>th</sup> International Kimberlite Conference (IAVCEI), Emplacement Workshop, Saskatoon, Canada.
- Gernon, T.M.**, 2004. *An assessment of palaeo-depth indicators in the Lough Nafoeey Group Volcanics, Kilbride Peninsula, Co. Mayo*. Irish Geological Research Meeting, Galway, Ireland.
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