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# Brian Horsfield

## Publication List

### Six publications with major impact for the work of GEOS4

di Primio, R. & Horsfield, B. (2006) From petroleum-type organofacies to hydrocarbon phase prediction. *AAPG Bulletin*, 90, 1031-1058.

Han, Y., Horsfield, B. & Curry, D.J. (2017) Control of facies, maturation and primary migration on biomarkers in the Barnett Shale sequence in the Marathon 1 Mesquite well, Texas. *Marine and Petroleum Geology*, Volume 85, August 2017, 106-116.

Horsfield, B., Leistner, F. & Hall, K. (2015) Microscale Sealed Vessel Pyrolysis. In: Grice K. (editor) *Principles and Practice of Analytical Techniques in Geosciences*, Royal Society of Chemistry Detection Science Series No. 4, 209-250.

Horsfield, B. & di Primio, R. (2014) Fluid Compositional Prediction in Conventional and Unconventional Petroleum Systems. *SPE Unconventional Resources Conference*, 1-3 April, The Woodlands, Texas, USA. <http://dx.doi.org/10.2118/169016-MS>

Horsfield, B., Schenk, H.J., Mills, N. & Welte, D.H. (1992) Investigation of the in-reservoir conversion of oil to gas: compositional and kinetic findings from closed-system programmed-temperature pyrolysis. In: Eckardt, C. et al., *Advances in Organic Geochemistry 1991*, *Organic Geochemistry*, 19, 191-204.

Mahlstedt, N. & Horsfield, B. (2012) Metagenetic methane generation in gas shales I. Screening protocols using immature samples. *Marine and Petroleum Geology*, 31, 1, 27-42.

### Publications in the order of publication date

#### 2017

Han, Y., Horsfield, B., Wirth, R., Mahlstedt, N. & Bernard, S. (2017) Oil retention and porosity evolution in organic-rich shales: *AAPG Bulletin*, v. 101, no. 6, 807-827, doi:10.1306/09221616069.

Hosseini, S.H., Horsfield B., Wilkes, H., Poetz, H., Yalçın, M.N. & Kavak, O. (2017) Role of maturity in controlling the composition of solid bitumens in veins and vugs from SE Turkey as revealed by

conventional and advanced geochemical tools. *Energy and Fuels*, DOI 10.1021/acs.energyfuels.6b01903

Pan, Songqi, Horsfield, B., Zou, Caineng, Yang, Zhi & Gaod, Dapeng (2017) Statistical analysis as a tool for assisting geochemical interpretation of the Upper Triassic Yanchang Formation, Ordos Basin, Central China. *International Journal of Coal Geology*, 17351–64

Ziegs, V., Horsfield, B., Skeie, J.E. & Rinna, J. (2017) Petroleum retention in the Mandal Formation, Central Graben, Norway. *Marine and Petroleum Geology*, 83, 195-214.

## 2016

Abbassi, S., Edwards, D. S., George, S. C., Volk, H., Mahlstedt, N., di Primio, R. & Horsfield, B. (2016) Petroleum potential and kinetic models for hydrocarbon generation from the Upper Cretaceous to Paleogene Latrobe Group coals and shales in the Gippsland Basin, Australia. *Organic Geochemistry*, 91, 54-67.

Hu, S., Wilkes, H., Horsfield, B., Bhen, H. & Li, S. (2016) On the origin, mixing and alteration of crude oils in the Tarim Basin. *Organic Geochemistry*, 97, 17-34.

Mahlstedt, N., Horsfield, B., Wilkes, H. & Pötz, S. (2016) Tracing the impact of fluid retention on bulk petroleum properties using nitrogen-containing polar compounds. *Energy Fuels*, 30 (8), 6290–6305.

Murillo, W. A., Vieth-Hillebrand, A., Horsfield, B. & Wilkes, H. (2016) Petroleum source, maturity, alteration and mixing in the southwestern Barents Sea: New insights from geochemical and isotope data. *Marine and Petroleum Geology*, Volume 70, February 2016, 119–143.

Sachse, V., Anka, Z., Littke, R., Rodriguez, J. F., Horsfield, B. & di Primio, R. (2016) Burial, Temperature and Maturation History of the Austral and Western Malvinas Basins, Southern Argentina, Based on 3D Basin Modelling. *Journal of Petroleum Geology*, 39, 169–191.

Yang, S. & Horsfield, B. (2016) Some predicted effects of minerals on the generation of petroleum in nature. *Energy & Fuels*, 30, 8, 6677-6687.

Yang, S., Horsfield, B., Mahlstedt, N., Stephenson, M. & Könitzer, S. (2016) On the primary and secondary petroleum generating characteristics of the Bowland Shale, northern England. *Journal Geological Society London*, 173, 2, 292-305.

## 2015

Geel, C., de Wit, M., Booth P., Schulz H.-M. & Horsfield B. (2015) Palaeo-environment, diagenesis and characteristics of Permian black shales in the Lower Karoo Supergroup flanking the Cape Fold Belt

near Jansenville, Eastern Cape, South Africa: implications for the shale gas potential of the Karoo Basin. *South African Journal of Geology* Vol. 118 No. 3, 249-274. doi:10.2113/gssajg.118.3. 249

Horsfield, B., di Primio, R., Hübner, A., Littke, R. & Abeed, Q. (2015) On the Development of Unconventional Fossil Energy Resources in the Arabian Gulf States. In: *The Emirates Center for Strategic Studies and Research (Ed.), Unconventional Fossil Fuels: The Next Hydrocarbon Revolution?*, Abu Dhabi, United Arab Emirates: The Emirates Center for Strategic Studies and Research, 67-94.

Horsfield B., Leistner F. & Hall K. (2015) Microscale Sealed Vessel Pyrolysis. In: Grice K. (editor) *Principles and Practice of Analytical Techniques in Geosciences*, Royal Society of Chemistry Detection Science Series No. 4, 209-250.

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Abbassi, S., George, S. C., Edwards, D. S., di Primio, R., Horsfield, B. & Volk, H. (2014) Generation characteristics of Mesozoic syn- and post-rift source rocks, Bonaparte Basin, Australia: New insights from compositional kinetic modelling. *Marine and Petroleum Geology*, 50, 148-165.

Abbassi, S., Horsfield, B., George, S.C., Edwards, D.S., Volk, H. & di Primio, R. (2014) Geochemical characterisation and predicted bulk properties of petroleum generated from Jurassic and Cretaceous source rocks in the Vulcan Sub-basin, Bonaparte Basin, North West Shelf of Australia. *Organic Geochemistry* 76, 82-103.

Bernard, S. & Horsfield, B. (2014) Thermal Maturation of Gas Shale Systems. *Annual Review of Earth and Planetary Sciences*, 42, 635-651.

Han, Y., Mahlstedt, N. & Horsfield, B. (2014) Migration and Retention of Hydrocarbons in Barnett Shale - Abstracts, AAPG 2014 Annual Convention and Exhibition "Ideas and Innovation: Fuel for the Energy Capital" (Houston, Texas 2014), <http://www.searchanddiscovery.com/abstracts/html/2014/90189ace/1841519.html>

Han, S., Horsfield, B., Zhang, J., Mahlstedt, N., di Primio, R. & Tang, X. (2014) Source Rock Properties and Hydrocarbon Generating Kinetics of Lacustrine Shales in Ordos Basin, China. Abstracts, AAPG 2014 Annual Convention and Exhibition "Ideas and Innovation: Fuel for the Energy Capital" (Houston, Texas 2014).

Horsfield B. & di Primio R. (2014) Fluid Compositional Prediction in Conventional and Unconventional Petroleum Systems. SPE Unconventional Resources Conference, 1-3 April, The Woodlands, Texas, USA. <http://dx.doi.org/10.2118/169016-MS>

Mahlstedt, N., Hübner, A., di Primio, R. & Horsfield, B. (2014) Think molecular it translates into pay! *GeoExPro*, 11, 2, 74-78.

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Transform Ion Cyclotron Resonance Mass Spectrometry, *Energy & Fuels*, 28, 8, p. 4877-4888 (<http://doi.org/10.1021/ef500688s>).

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Ziegs, V., Mahlstedt, N., Bruns, B. & Horsfield, B. (2014) Predicted bulk composition of petroleum generated by Lower Cretaceous Wealden black shales, Lower Saxony Basin, Germany. *International Journal of Earth Sciences*. DOI: <http://doi.org/10.1007/s00531-014-1081-y>

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Vu, T. T. A., Horsfield, B., Mahlstedt, N., Schenk, H. J., Kelemen, S. R., Walters, C. C., Kwiatek, P. J. & Sykes, R. (2013) The structural evolution of organic matter during maturation of coals and its impact on petroleum potential and feedstock for the deep biosphere. *Organic Geochemistry*, 62, 17-27.

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- Bernard, S., Brian Horsfield, Anja Schreiber, Richard Wirth, Tiem Thi Anh Vu, Ferdinand Perssen, Sven Könitzer, Herbert Volk, Neil Sherwood, David Fuentes & Hans-Martin Schulz (2010) Multi-scale detection of organic and inorganic signatures provides insights into gas shale properties and

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