

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. <https://doi.org/10.1306/02140605129>

Horsfield, B., Mahlstedt, N., Weniger, P., Misch, D., Vranjes-Wessely, S., Han, S. & Wang, C. (2022) Molecular hydrogen from organic sources in the deep Songliao Basin, P.R. China. *International Journal of Hydrogen Energy*, 47, 16750-16774. <https://doi.org/10.1016/j.ijhydene.2022.02.208>

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. <https://doi.org/10.1039/9781782625025-00209>

Horsfield, B., Mahlstedt, N., Michael, E., MacMahon, N. & Tobey, M. (2019) Production Fractionation and Efficiency Indicators from Phase Snapshots. *UrTEC 375*, Denver, 22-24 July. <https://doi.org/10.15530/urtec-2019-375>

Horsfield, B., Schulz, H., Bernard, S., Mahlstedt, N., Han, Y. & Kuske, S. (2020) Oil and Gas Shales. - In: Wilkes, H. (Ed.), *Hydrocarbons, Oils and Lipids: Diversity, Origin, Chemistry and Fate (Handbook of Hydrocarbon and Lipid Microbiology)*, 523-556. https://doi.org/10.1007/978-3-319-90569-3_18

Noah, M., Forsythe, J., di Primio, R., Mehay, S., Mullins, O.C., Mahlstedt, N. & Horsfield, B. (2022) Heavy End Evaluation in Oils and Associated Asphaltene Deposits from Two Adjacent Reservoirs by High-Resolution Mass Spectrometry. *Energy Fuels*, 36, 16, 8866-8878. <https://doi.org/10.1021/acs.energyfuels.2c00913>

Publications in the order of publication date

2024

Yang, S., Horsfield, B., Mangelsdorf, K., di Primio, R., Rinna, J., Hartwig, A., Martín-Monge, A., Tocco, R.A. & Elias, R. (2024) Pristine biomarker compositions recovered from biodegraded oil samples using MSSV-Hy. *Marine and Petroleum Geology* 162, 106713. <https://doi.org/10.1016/j.marpetgeo.2024.106713>

2023

- Bo L., Mahlstedt, N. Horsfield, B., Tian, S., Huo, Q., Wen, Z., & Pan, Z. (2023) Phase behavior and GOR evolution using a natural maturity series of lacustrine oil-prone shale: Implications from compositional modelling. *Organic Geochemistry*, 185. <https://doi.org/10.1016/j.orggeochem.2023.104675>
- Boreham, C.J., Edwards, D.S., Feitz, A., Murray, A.P., Mahlstedt, N. & Horsfield, B. (2023) Modelling of hydrogen gas generation from overmature organic matter in the Cooper Basin, Australia. *The APPEA Journal*. <https://doi.org/10.1071/AJ22084>
- Chukwuma, K., Schulz, H.-M. & Horsfield, B. (2023) The effects of Jurassic igneous intrusions on the generation and retention of shale gas in the Early Permian Whitehill Formation, Karoo Basin, South Africa. *International Journal of Coal Geology*, 269,104219. <https://doi.org/10.1016/j.coal.2023.104219>
- Han, S., Xie, L., Du, X., Xiang, C., Huang, J., Tang, Z., Wang, C., Horsfield, B. & Mahlstedt, N. (2023) Insights into organic metagenesis using Raman spectroscopy and high resolution mass spectrometry: A case study of the Shahezi formation, deep Songliao basin, China. *International Journal of Coal Geology* 265, 104153. <https://doi.org/10.1016/j.coal.2022.104153>
- Yue, H., Horsfield, B., Schulz, H.-M., Yang, S, Vieth-Hillebrand, A. & Poetz, S. (2023) Preservation of biotic and palaeoenvironmental signatures in organosulfur compounds of immature fine-grained sedimentary rocks. *International Journal of Coal Geology*, 265. <https://doi.org/10.1016/j.coal.2022.104168>

2022

- Han, Y, Noah, M., Lüders, V., Hartwig, A., Rinna, J., Skeie, J.E., Horsfield, B. & Mangelsdorf, K. (2022) Geochemical characteristics of inclusion oils from the Skarv field A segment and their implications for the oil charge and leakage history. *Marine and Petroleum Geology* 137, 105506. <https://doi.org/10.1016/j.marpetgeo.2021.105506>
- Han, Y., Noah, M., Lüders, V., Körmös, S., Schubert, F., Poetz, S., Horsfield, B. & Mangelsdorf, K. (2022). Fractionation of hydrocarbons and NSO-compounds during primary oil migration revealed by high resolution mass spectrometry: insights from oil trapped in fluid inclusions. *International Journal of Coal Geology*, 254, 103774. <https://doi.org/10.1016/j.coal.2022.103974>
- Horsfield, B., Mahlstedt, N., Weniger, P., Misch, D., Vranjes-Wessely, S., Han, S. & Wang, C. (2022) Molecular hydrogen from organic sources in the deep Songliao Basin, P.R. China. *International Journal of Hydrogen Energy*, 47,16750-16774. <https://doi.org/10.1016/j.ijhydene.2022.02.208>
- Mahlstedt, N., Horsfield, B., Weniger, P., Misch, D., Shi, X., Noah, M. & Boreham, C.J. (2022) Molecular hydrogen from organic sources in geological systems. *Journal of Natural Gas Science and Engineering* 105, 104704. <https://doi.org/10.1016/j.jngse.2022.104704>

- Noah, M., Forsythe, J., di Primio, R., Mehay, S., Mullins, O.C., Mahlstedt, N. & Horsfield, B. (2022) Heavy End Evaluation in Oils and Associated Asphaltene Deposits from Two Adjacent Reservoirs by High-Resolution Mass Spectrometry, *Energy and Fuels*, 36, 16, 8866–8878.
<https://doi.org/10.1021/acs.energyfuels.2c00913>
- Song, Y., Michael, E., McLin, K., Mahlstedt, N., Horsfield, B., Pötz, S. & Mangelsdorf, K. (2022) Compositional Fractionation of Petroleum Fluids During Migration and Production: A Bakken Case Study with Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry. *URTeC*,
<https://doi.org/10.15530/urtec-2022-3722153>
- Yang, S., Horsfield, B., Mangelsdorf, K., Rinna, J., Hartwig, A., di Primio, R., Martín-Monge, A., Tocco, R.A. & Elias, R. (2022) Corroborative insights into genetically related kerogen, asphaltenes and hydrocarbons using free and bound biomarkers. *International Journal of Coal Geology*, 261, 104080. <https://doi.org/10.1016/j.coal.2022.104080>
- Yue, H., Vieth-Hillebrand, A., Yang, S., Schulz, H.-M., Horsfield, B. & Pötz, S. (2022) The retention of precursor biotic signatures in the organonitrogen and organooxygen compounds of fine-grained sedimentary rocks. *International Journal of Coal Geology*, 259, 104039.
<https://doi.org/10.1016/j.coal.2022.104039>

2021

- Horsfield, B., Zou, C., Li, J., Yang, S., Mahlstedt, N., Misch, D., Gross, D., Ma, W., Wang, Y. & Tan, J. (2021) Prediction of the gas generating characteristics of the Qiongzhusi and Longmaxi Formations, Yangtze Platform, south China, using analogues. *AAPG Bulletin*, 105, 5, 945-985.
<https://doi.org/10.1306/11182018244>
- Yue, H., Vieth-Hillebrand, A., Han, Y., Horsfield, B., Schleicher, A. & Poetz, S. (2021) Unravelling the impact of lithofacies on the composition of NSO compounds in residual and expelled fluids of the Barnett, Niobrara and Posidonia formations. *Organic Geochemistry*, 155, 104225.
<https://doi.org/10.1016/j.orggeochem.2021.104225>
- Murillo, W.A., Horsfield, B., Garcin, Y. Vieth, A. & Sachse, D. (2021) Compound-specific $\delta^2\text{H}$ and $\delta^{13}\text{C}$ values of n-alkanes as a tool to unravel complex petroleum mixtures in the South Viking Graben, Norway. *Organic Geochemistry*, 104167. <https://doi.org/10.1016/j.orggeochem.2020.104167>
- Han, Y., Horsfield, B., Mahlstedt, N. & Noah, M. (2021) Chemostatistic allocation of shale oil production using acidic heterocompounds *AAPG Bulletin*, 105, 11, 2207–2219.
<https://doi.org/10.1306/06102119035>
- Yang, S., Horsfield, B., Karger, C., Perssen, F., Wu, L. & Mangelsdorf, K. (2021) Release of Bound Biomarkers Using Microscale Sealed Vessel. *Energy and Fuels*, 35, 18, 14499–14509.
<https://doi.org/10.1021/acs.energyfuels.1c01244>

- Vranjes-Wessely, S., Misch, D., Kiener, D., Cordill, M.J., Frese, N., Beyer, A, Horsfield, B. Wang, C. & Sachsenhofer, R.F. (2021) High-speed nanoindentation mapping of organic matter-rich rocks: A critical evaluation by correlative imaging and machine learning data analysis. *International Journal of Coal Geology*, 247, 103847. <https://doi.org/10.1016/j.coal.2021.103847>
- Han Y., Horsfield B., Mahlstedt N. & LaReau H. (2021) Bitumen geochemistry and producibility in the Upper Cretaceous Niobrara Formation shale oil play. *AAPG Bulletin* 105, 10, 2017–2039. <https://doi.org/10.1306/03122118078>
- Han, S., Tang, Z., Wang, C., Horsfield, B., Wang, T. & Mahlstedt, N. (2022) Hydrogen-rich Gas Discovery in Continental Scientific Drilling Project of Songliao Basin, Northeast China: New Insights into Deep Earth Exploration. *Science Bulletin*, 67, 10, 1003-1006. <https://doi.org/10.1016/j.scib.2022.02.008>
- Horsfield, B., Boreham, C.J., Edwards, D.S., di Primio, R. & Vu, T.T. (2021) Compositional kinetics - Ordovician Goldwyer and Bongabinni formations, Canning Basin, Western Australia Data release. *Geoscience Australia*. <http://dx.doi.org/10.11636/Record.2021.034>

2020

- Horsfield, B., Schulz, H., Bernard, S., Mahlstedt, N., Han, Y. & Kuske, S. (2020) Oil and Gas Shales. - In: Wilkes, H. (Ed.), *Hydrocarbons, Oils and Lipids: Diversity, Origin, Chemistry and Fate*, (Handbook of Hydrocarbon and Lipid Microbiology), 523-556. https://doi.org/10.1007/978-3-319-90569-3_18
- Noah, M., Horsfield, B., Han, S., & Wang, C. (2020) Precise maturity assessment over a broad dynamic range using polycyclic and heterocyclic aromatic compounds. *Organic Geochemistry*, 148, 104099. <https://doi.org/10.1016/j.orggeochem.2020.104099>
- Han, Y., Noah, M., Lüders, V. Horsfield, B. & Mangelsdorf K. (2020) NSO-compounds in oil-bearing fluid inclusions revealed by FT-ICR-MS in APPI (+) and ESI (-) modes: A new method development. *Organic Geochemistry*, 149, 104-113. <https://doi.org/10.1016/j.orggeochem.2020.104113>
- Han, Y., Poetz, S., Mahlstedt, N. & Horsfield, B. (2020) On the release of acidic NSO compounds from the oil-mature Barnett Shale using different solvents. *Journal of Petroleum Geoscience and Engineering*, 185, 106605. <https://doi.org/10.1016/j.petrol.2019.106605>
- Yang, S. & Horsfield, B. (2020) Critical review of the uncertainty of Tmax in revealing the thermal maturity of organic matter in sedimentary rocks. *International Journal of Coal Geology*, 225, 103500. <https://doi.org/10.1016/j.coal.2020.103500>
- Yang, S., Schulz, H.-M., Horsfield, B., Schovsbo, N.H., Grice, K., & Zhang, J. (2020) Geological alteration of organic macromolecules by irradiation: Implications for organic matter occurrence on Mars: *Geology*, 48, 7, 713–717. <https://doi.org/10.1130/G47171.1>

2019

- Kuske, S., Horsfield, B., Michael, G.E., Jweda, J., Song, Y. (2019) Geochemical factors controlling the phase behavior of Eagle Ford Shale petroleum fluids. *AAPG Bulletin*, 103, 4, 835-870.
<https://doi.org/10.1306/09051817227>
- Han, Y., Horsfield, B., Mahlstedt, N., Wirth, R., Curry, D.J. & LaReau, H. (2019) Factors controlling source and reservoir characteristics in the Niobrara shale-oil system, Denver Basin. *AAPG Bulletin*, 103, 2045-2072. <https://doi.org/10.1306/0121191619717287>
- Han, S., Zhang, J., Horsfield, B. & Wang, C. (2018) Shale oil and gas generating characteristics of lacustrine Shahejie formation in eastern sag of Liaohe depression, Northeast China. - *International Journal of Oil, Gas and Coal Technology*, 19, 1, 83–96.
<https://doi.org/10.1504/IJOGCT.2018.093972>
- Horsfield, B., Mahlstedt, N., Michael, E., MacMahon, N. & Tobey, M. (2019) Production Fractionation and Efficiency Indicators from Phase Snapshots. *UrTEC 375*, Denver, 22-24 July.
<https://doi.org/10.15530/urtec-2019-375>
- Horsfield, B., Schulz, H., Bernard, S., Mahlstedt, N., Han, Y. & Kuske, S. (2018) Oil and Gas Shales in "Handbook of Hydrocarbon and Lipid Microbiology Series. Hydrocarbons, Oils and Lipids: Diversity, Origin, Chemistry and Fate" (edited by Wilkes, H.), Springer. https://doi.org/10.1007/978-3-319-54529-5_18-1
- Mahlstedt, N. & Horsfield, B. (2019) Thermovaporisation: a screening tool for the gas-sorptive properties of source rocks. *Organic Geochemistry*, 131, 1-4.
<https://doi.org/10.1016/j.orggeochem.2019.02.006>
- Mahlstedt, N., Horsfield, B., Karg, H., David, P. & Garlich, T. (2019) Vaca Muerta Unconventional Oil Study – Insights from Organic Geochemistry. *URTEC: 379*, Denver, 22-24 July.
<https://doi.org/10.15530/urtec-2019-379>
- Misch, D., Gross, D., Hawranek, G., Horsfield, B., Klaver, J., Mendez-Martin, F., Urai, J., Vranjes-Wessely, S., Sachsenhofer, R. & Schmatz, J. (2019) Solid bitumen in shales: petrographic characteristics and implications for reservoir characterization. *International Journal of Coal Geology*, 205, 14-31.
<https://doi.org/10.1016/j.coal.2019.02.012>
- Misch, D., Riedl, F., Liu, B., Horsfield, B., Ziegls, V., Mendez-Martin, F., Vranjes-Wessely, S. & Sachsenhofer, R. (2019) Petrographic and sorption-based characterization of bituminous organic matter in the Mandal Formation, Central Graben (Norway). - *International Journal of Coal Geology*, 211, 103229. <https://doi.org/10.1016/j.coal.2019.103229>
- Murillo, W. A., Horsfield, B. & Vieth-Hillebrand, A. (2019) Unraveling petroleum mixtures from the South Viking Graben, North Sea: A study based on $\delta^{13}\text{C}$ of individual hydrocarbons and molecular data. *Organic Geochemistry*, 137. <https://doi.org/10.1016/j.orggeochem.2019.103900>

- Han, Y., Horsfield, B., LaReau, H. & Mahlstedt, N. (2019) Intraformational migration of petroleum: insights into the development of sweet spot in the Cretaceous Niobrara shale-oil system, Denver Basin. *Marine and Petroleum Geology*, 107, 301-309. <https://doi.org/10.1016/j.marpetgeo.2019.05.026>
- Poetz, S., Kuske, S., Song, Y., Jweda, J., Michael, E. & Horsfield, B. (2019) Using polar nitrogen-, sulphur- and oxygen compound compositions from ultra high resolution mass spectrometry for petroleum fluid assessment in the Eagle Ford Formation, Texas. In: DOWEY, P., OSBORNE, M. & VOLK, H. (eds) *Application of Analytical Techniques to Petroleum Systems*. Geological Society, London, Special Publications, 484. <https://doi.org/10.1144/SP484-2018-175>
- Wu, L. & Horsfield, B. (2019) Initial insights into releasing bound biomarkers from kerogen matrices using microscale sealed vessel catalytic hydrogenation (MSSV-HY). *Organic Geochemistry* 130, 22-32. <https://doi.org/10.1016/j.orggeochem.2018.11.001>
- Zhang, Y., Horsfield, B., Hou, D., Noah, M. & Yang, S. (2019) Impact of hydrothermal activity on organic matter quantity and quality during deposition in the Permian Dalong Formation, Southern China. *Marine and Petroleum Geology* 110, 901-913. <https://doi.org/10.1016/j.marpetgeo.2019.08.049>
- Zou, C., Pan, S., Horsfield B., Yang Z., Hao S., Liu, E. & Zhang, L. (2019) Oil retention and intrasource migration in the organic-rich lacustrine Chang 7 shale of the Upper Triassic Yanchang Formation, Ordos Basin, central China. *AAPG Bulletin*, 103/11, 2627-2663. <https://doi.org/10.1306/01301917052>

2018

- Han, Y., Horsfield, B., Mahlstedt, N., LaReau, H. & Curry, D. J. (2018) Compositional fractionation of petroleum from reservoir to wellhead in the Niobrara shale oil play. *International Journal of Coal Geology*, 198, 156-166. <http://doi.org/10.1016/j.coal.2018.09.006>
- Han, Y., Pötz, S., Mahlstedt, N., Karger, C. & Horsfield, B. (2018) Fractionation of pyrrolic nitrogen-containing compounds during primary migration of petroleum within the Barnett Shale sequence of Marathon 1 Mesquite Well, Texas. *Energy Fuels*, 2018, 32 (4), 4638-4650. <https://doi.org/10.1021/acs.energyfuels.7b03488>
- Han, Y., Pötz, S., Mahlstedt, N., Karger, C. & Horsfield, B. (2018) Fractionation and origin of NyOx and Ox compounds in the Barnett Shale sequence of the Marathon 1 Mesquite well, Texas. *Marine and Petroleum Geology*, 97, 517-524. <http://doi.org/10.1016/j.marpetgeo.2018.07.031>
- Hosseini, S.H., Horsfield, B., Wilkes, H., Vieth-Hillebrand, A., Yalçinc, M.N. & Kavak, O. (2018) Comprehensive geochemical correlation between surface and subsurface hydrocarbon occurrences in the Batman-Mardin-Şırnak area (SE Turkey). *Marine and Petroleum Geology*, 93, 95-112. <https://doi.org/10.1016/j.marpetgeo.2018.02.035>

- Stapel, J.G., Schwamborn, G., Schirrmeister, L., Horsfield, B. & Mangelsdorf, K. (2018) Substrate potential of last interglacial to Holocene permafrost organic matter for future microbial greenhouse gas production. *Biogeosciences*, 15, 1969–1985. <https://doi.org/10.5194/bg-15-1969-2018>
- Yang, S., Schulz, H.-M., Horsfield, B., Schovsbo, N.H., Noah, M., Panova, E., Rothe, H. & Hahne, K. (2018) On the changing petroleum generation properties of Alum Shale over geological time caused by uranium irradiation. *Geochimica et Cosmochimica Acta*, 229, 20-35. <https://doi.org/10.1016/j.gca.2018.02.049>
- Ziegs, V., Noah, M., Poetz, S., Horsfield, B., Hartwig, A., Rinna, J. & Skeie, J.E. (2018) Unravelling maturity- and migration-related carbazole and phenol distributions in Central Graben crude oils. *Marine and Petroleum Geology*, 94, 114–130. <https://doi.org/10.1016/j.marpetgeo.2018.03.039>
- Ziegs, V., Pötz, S., Horsfield, B., Rinna, J., Hartwig, A. & Skeie, J.E. (2018) Deeper insights into oxygen-containing compounds of the Mandal Formation, Central Graben, Norway. *Energy & Fuels*, 32, 12, 12030-12048. <https://doi.org/10.1021/acs.energyfuels.8b01647>

2017

- Aldahik, A., Schulz, H.-M., Horsfield, B., Wilkes, H., Dominik, W. & Nederlof, P. (2017) Crude oil families in the Euphrates Graben (Syria). *Marine and Petroleum Geology*, 86, 325-342. <https://doi.org/10.1016/j.marpetgeo.2017.05.030>
- Gruner, A., Mangelsdorf, K., Vieth-Hillebrand, A., Horsfield, B. van der Kraan, G.M., Köhler, T., Janka, Ch., Morris, B.E.L. & Wilkes, H. (2017) Membrane Lipids as Indicators for Viable Bacterial Communities Inhabiting Petroleum Systems. *Microbial Ecology* *Microbial Ecology*. <https://doi.org/10.1007/s00248-017-0954-6>
- 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. <https://doi.org/10.1016/j.marpetgeo.2017.04.018>
- Han, Y., Horsfield, B., Wirth, R., Mahlstedt, N. & Bernard, S. (2017) Oil retention and porosity evolution in organic-rich shales: AAPG Bulletin, 101, 6, 807-827. <https://doi.org/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*. <https://doi.org/10.1021/acs.energyfuels.6b01903>
- Ma, Y., Cao, T., Snowdon, L., Qian, M., Jiang, Q., Li, M., Mahlstedt, N. & Horsfield, B. (2017) Impact of Different Experimental Heating Rates on Calculated Hydrocarbon Generation Kinetics. *Energy & Fuels*, 31, 10, 10378-10392. <https://doi.org/10.1021/acs.energyfuels.7b01035>

- Pan, S., Horsfield, B., Zou, C., Yang, Z. & Gaod, D. (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*, 17351–6. <https://doi.org/10.1016/j.coal.2017.02.009>
- Rahman, H.M., Kennedy, M., Löhr, S., Dewhurst, D.N., Sherwood, N., Yang, S. & Horsfield, B. (2017) The influence of shale depositional fabric on the kinetics of hydrocarbon generation through control of mineral surface contact area on clay catalysis. *Geoch Cosm Acta*, 220, 429-448. <https://doi.org/10.1016/j.gca.2017.10.012>
- Sachsenhofer, R.F. et al (2017) The type section of the Maikop Group (Oligocene-Lower Miocene) at the Belaya River (North Caucasus): Depositional environment and hydrocarbon potential. *AAPG Bulletin*. <https://doi.org/10.1306/08051616027>
- Stock, A.T., Littke, R., Schwarzbauer, J., Horsfield, B. & Hartkopf-Fröder, C. (2017) Organic geochemistry and petrology of Posidonia Shale (Lower Toarcian, Western Europe) – The evolution from immature oil-prone to overmature dry gas-producing Kerogen. *International Journal of Coal Geology*, 176-177, 36-48. <https://doi.org/10.1016/j.coal.2017.04.016>
- Ziegls, 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. <https://doi.org/10.1016/j.marpetgeo.2017.03.005>

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.

2014

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.

Pötz, S.; Horsfield, B. & Wilkes, H. (2014) Maturity-Driven Generation and Transformation of Acidic Compounds in the Organic-Rich Posidonia Shale as Revealed by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry, *Energy & Fuels*, 28, 8, p. 4877-4888 (<http://doi.org/10.1021/ef500688s>).

Tan, J., Horsfield, B., Fink, R., Krooss, B., Schulz, H.-M., Rybacki, E., Zhang, J., Boreham, C. J., van Graas, G. & Tocher, B. A. (2014) Shale Gas Potential of the Major Marine Shale Formations in the Upper Yangtze Platform, South China, Part III: Mineralogical, Lithofacial, Petrophysical, and Rock Mechanical Properties. *Energy & Fuels*, 28, 4, 2322-2342.

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>

2013

Bernard, S., Wirth, R., Schreiber, A., Schulz, H.-M. & Horsfield, B. (2013) From shale oil to shale gas: mineralogical and geochemical evolution of Barnett Shales. *Mineralogical Magazine - Goldschmidt Conference Abstracts*, 77, 5, 692.

Bernard, S., Wirth, R., Schreiber, A., Bowen, L., Aplin, A. C., Mathia, E. J., Schulz, H.-M. & Horsfield, B. (2013) FIB-SEM and TEM investigations of an organic-rich shale maturation series from the lower Toarcian Posidonia Shale, Germany: Nanoscale pore system and fluid-rock interactions. In: Camp, W., Diaz, E., Wawak, B. (Eds.), *Electron microscopy of shale hydrocarbon reservoirs*, (AAPG memoir; 102), 53-66.

Geel, C., Schulz, H.-M., Booth, P., de Wit, M. & Horsfield, B. (2013) Shale gas characteristics of Permian black shales in South Africa: results from recent drilling in the Ecca Group (Eastern Cape). *Energy Procedia*, 40, 256-265.

Han, S., Zhang, J., Li, Y., Horsfield, B., Tang, X., Jiang, W. & Chen, Q. (2013) Evaluation of Lower Cambrian Shale in Northern Guizhou Province, South China: Implications for Shale Gas Potential. *Energy & Fuels*, 27, 6, 2933-2941.

Horsfield, B. (2013) On the sustainable development of shale resource plays. In: Eriksson, A., Gandossi, L., Zeniewski, P. (Eds.), *Workshop proceedings, Safe and Efficient Shale Gas Exploration and Production* (Amsterdam).

- Horsfield, B., Aplin, A., Kroos, B., Littke, R., Bernard, S., Ritter, O., di Primio, R. & Mahlstedt, N. (2013) On the evolving source and reservoir properties of the posidonia unconventional resource play. In: González-Pérez, J. A., González-Vila, F. J., Jiménez-Morillo, N. T., Almendros, G. (Eds.), - Book of Abstracts of the Communications, 26th International Meeting on Organic Geochemistry - IMOG (Costa Adeje, Tenerife Spain 2013) (Costa Adeje 2013), 47-48.
- Mahlstedt, N., di Primio, R. & Horsfield, B. (2013) GORFit – From Liquids to Late Gas: Deconvoluting Primary from Secondary Gas Generation Kinetics. Book of Abstracts of the Communications, 26th International Meeting on Organic Geochemistry - IMOG (Costa Adeje, Tenerife Spain 2013) (Costa Adeje, Tenerife, Spain 2013), 193-194.
- Mahlstedt, N. & Horsfield, B. (2013) A new screening tool for the rapid evaluation of gas sorption capacity in shales, AAPG Hedberg Research Conference (Beijing, China 2013).
- Rodrigues Duran, E., di Primio, R., Anka, Z., Stoddart, D. & Horsfield, B. (2013) 3D-Basin modelling of the Hammerfest Basin (southwestern Barents Sea): A quantitative assessment of petroleum generation, migration and leakage. *Marine and Petroleum Geology*, 45, 281-303.
- 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.
- Wilke, F., Vieth-Hillebrand, A., Naumann, R., Horsfield, B. & Erzinger, J. (2013) Mobility of inorganic and organic compounds from black shales during unconventional gas production. *Mineralogical Magazine - Goldschmidt Conference Abstracts*, 77, 5, 2496.
- Zhu, Y., Wilke, F., Horsfield, B. & Vieth-Hillebrand, A. (2013 online) Factors Controlling the Composition of Leachate in Black (Gas) Shale Extraction - Book of Abstracts of the Communications, 26th International Meeting on Organic Geochemistry - IMOG (Costa Adeje, Tenerife Spain 2013) (Costa Adeje), 575-576.

2012

- Berbesi, L.A., di Primio, R., Anka, Z., Horsfield, B. & Higley, D.K. (2012) Source rock contributions to the Lower Cretaceous heavy oil accumulations in Alberta: a basin modelling study. *AAPG Bulletin*, 96, 7, 1211-1234.
- Bernard, S., Horsfield, B., Schulz, H.-M., Wirth, R., Schreiber, A. & Sherwood, N. (2012) Geochemical evolution of organic-rich shales with increasing maturity: A STXM and TEM study of the Posidonia Shale (Lower Toarcian, northern Germany). *Marine and Petroleum Geology*, 31, 70-89.
- Hartwig, A, di Primio, R., Anka, Z. & Horsfield, B. (2012) Source rock characteristics and compositional kinetic models of Cretaceous organic rich black shales offshore southwestern Africa, *Organic Geochemistry* 51, 17-34.

Horsfield, B. & Schulz, H.-M. (2012) Preface to the Special Issue: Shale gas exploration and exploitation. In: *Insights into Shale Gas Exploration and Exploitation, Marine and Petroleum Geology*, 31, 1, 1-2.

Kuhn, P.P., di Primio, R., Hill, R., Lawrence, J.R. & Horsfield, B. (2012) Three-dimensional modeling study of the low-permeability petroleum system of the Bakken Formation. *AAPG Bulletin*, 96, 10, 1867-1897.

2011

Bernard, S., Horsfield, B., Schulz, H.-M., Schreiber, A., Wirth, R. & Sherwood, N. (2011) Nanoscale study of the mineralogical and geochemical evolution of black shales with increasing maturity. *Mineralogical Magazine*, 75, 3, 520.

Glombitza, C., Mangelsdorf, K. & Horsfield, B. (2011) Structural insights from boron tribromide ether cleavage into lignites and low maturity coals from the New Zealand Coal Band. *Organic Geochemistry*, 42, 3, 228-236.

Horsfield, B., Schulz, H.-M. & Kapp, I. (2011) Shale gas in Europe. *Public Service Review, European Science and Technology*, 11, 230-233.

Kroeger, K.F., di Primio, R. & Horsfield, B. (2011) Atmospheric methane from organic carbon mobilization in sedimentary basins – the sleeping giant? *Earth Science Reviews* 107, 3-4, 423-442.

Kuhlmann, G., Adams, S., Anka, Z., Campher, C., van der Spuy, D., di Primio, R. & Horsfield, B. (2011) 3D petroleum systems modelling within a passive margin setting, Orange Basin, blocks 3/4, offshore South Africa – Implications on gas generation, migration and leakage. *South African Journal of Geology*, 114, 3-4, 387-414.

Littke, R., Krooss, B., Uffmann, A.K., Schulz, H.-M. & Horsfield, B. (2011) Unconventional Gas Resources in the Palaeozoic of Central Europe. *Oil & Gas Science and Technology – Rev. IFP Energies nouvelles* IFP Energies nouvelles DOI: 10.2516/ogst/2010033

Mangelsdorf, K., Zink, K.-G., di Primio, R. & Horsfield, B. (2010) Microbial lipid markers within and adjacent to Challenger Mound in the Belgica carbonate mound province, Porcupine Basin, offshore Ireland (IODP Expedition 307). *Marine Geology*, 282, 91-101.

Maslen, E., Grice, K., Gale, J.D., Hallmann, C. & Horsfield, B. (2011) Corrigendum to “Crosetane: A potential marker of photic zone euxinia in thermally mature sediments and crude oils of Devonian age” [Org. Geochem. 40 (2009) 1-11] *Organic Geochemistry*, 42, 7, 862.

Parkes, R.J., Linnane, C.D., Webster, G., Sass, H., Weightman, A.J., Hornibrook, Ed R.C. & Horsfield, B. (2011) Prokaryotes stimulate mineral H₂ formation for the deep biosphere and subsequent thermogenic activity. *Geology*, 39, 3, 219-222.

2010

- 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 evolution– In: *GeoEnergy: from Visions to Solutions* (Horsfield B., Scheck-Wenderoth M., Krautz R.J. & Mutti M. eds), *Chemie der Erde*, 70, S3, 119-133.
- Hartwig, A., Könitzer, S., Boucsein, B., Horsfield B. & Schulz, H.-M. (2010) Applying classical shale gas evaluation concepts to Germany - Part II: Carboniferous in Northeast Germany. In: *GeoEnergy: from Visions to Solutions* (Horsfield, B., Scheck-Wenderoth, M., Krautz, R.J. and Mutti, M. eds), *Chemie der Erde*, 70, S3, 93–106.
- Horsfield, B., Scheck-Wenderoth, M., Krautz H.J. & Mutti M. (2010) *GeoEnergy: from visions to solutions*. *Chemie der Erde* 70, S3, 1.
- Horsfield, B. et al. (2010) Shale gas research: the way forward for Europe. *Oilfield Technology*, 3, 2, 14-18.
- Ismail, S., Schulz, H.-M., Wilkes, H., Horsfield, B., di Primio, R., Dransfield, M., Nederlof, P. & R. Tomeh (2010) Sedimentology, geochemistry and hydrocarbon potential of the Late Cretaceous Shiranish Formation in the Euphrates Graben (Syria) In: Vining, B.A. & Pickering, S. C. (eds) *Petroleum Geology: From Mature Basins to New Frontiers – Proceedings of the 7th Petroleum Geology Conference*, 811–819. DOI: 10.1144/0070811 # Petroleum Geology Conferences Ltd. Published by the Geological Society, London.
- Kuhlmann, G., Adams, S., Campher, C., van der Spuy, D., di Primio, R. & Horsfield, B. (2010) Passive margin evolution and its controls on natural gas leakage in the southern Orange Basin, Blocks 3 / 4, offshore South Africa *Marine and Petroleum Geology* 27, 973-992.
- Kuhn, P.P., di Primio, R. & Horsfield, B. (2010) Bulk composition and phase behaviour of petroleum sourced by the Bakken Formation of the Williston Basin. In: Vining, B.A. & Pickering, S. C. (eds) *Petroleum Geology: From Mature Basins to New Frontiers – Proceedings of the 7th Petroleum Geology Conference*, v. 7; p. 1065-1077, doi: 10.1144/0071065
- Lehne, E., Dieckmann, V. & Horsfield, B. (2010): Comparison of bulk kinetic parameters for asphaltenes from long-time stored and related fresher-produced crude oils. *Applied Geochemistry* 25, 382–388.
- Lehne, E., Dieckmann, V. & Horsfield, B. (2010): Tracking changes in thermal oil maturity and organofacies heterogeneities using alkylthiophene distributions in asphaltene pyrolysates. *Energy & Fuels*, 24, 550–556
- Pötz, S., Wilkes, H., Witt, M. & Horsfield, B. (2010) Characterization of complex assemblages of organic acids in geological samples by negative electrospray ionization mass spectrometry using a double-focusing magnetic sector field mass spectrometer. *Rapid Communications in Mass Spectrometry* 24, 1185-1197.

Sachsenhofer, R.F., Shymanovskyy, V.A., Bechtel, A., Gratzer, R., Horsfield, B. & Reischenbacher, D. (2010) Paleozoic Source Rocks in the Dniepr-Donets Basin (Ukraine) *Petroleum Geoscience*, 16/4, 377-399.

Schulz, H.-M., Horsfield, B. & Sachsenhofer, R. F. (2010) Shale gas in Europe: a regional overview and current research activities. In: Vining, B.A. & Pickering, S. C. (eds) *Petroleum Geology: From Mature Basins to New Frontiers – Proceedings of the 7th Petroleum Geology Conference*, 1079–1085. DOI: 10.1144/0071079 # Petroleum Geology Conferences Ltd. Published by the Geological Society, London.

2009

Fry, J.C., Horsfield, B., Sykes, R., Cragg, B. A., Heywood, C., Tae Kim, G., Mangelsdorf, K., Mildenhall, D. C., Rinna, J., Vieth, A., Zink, K.-G., Sass, H., Weightman, A.J., & Parkes, R.J. (2008) Prokaryotic populations and activities in an interbedded coal deposit, including a previously deeply buried section (1.6 – 2.3 km) above ~ 150 Ma basement rock. 1. *Geomicrobiology Journal*, 26/3, 163 – 178

Glombitza, C., Mangelsdorf, K. & Horsfield, B. (2009) A novel procedure to detect low molecular weight compounds released by alkaline ester cleavage from low maturity coals to assess its feedstock potential for deep microbial life. *Organic Geochemistry*, 40, 175–183.

Glombitza, C., Mangelsdorf, K. & Horsfield, B. (2009) Maturation related changes in the distribution of ester bound fatty acids and alcohols in a coal series from the New Zealand Coal Band covering diagenetic to catagenetic coalification levels. *Organic Geochemistry*, 40, 1063-1073.

Kroeger, K., di Primio, R. & Horsfield, B. (2009) Hydrocarbon flow modeling in complex structures (Mackenzie Basin, Canada). *AAPG Bulletin*, 93/9, 1209–1234.

Lehne, E., Dieckmann, V., di Primio, R., Fuhrmann, A. & Horsfield, B. (2009) Changes in gas composition during simulated maturation of sulfur rich type II-S source rock and related petroleum asphaltenes. *Organic Geochemistry*, 40/5), 604-616.

Mahlstedt, N. & Horsfield, B. (2009): High temperature methane as an unconventional gas source. *Geochimica et Cosmochimica Acta*, 73, 13, Suppl. 1, A817.

Mangelsdorf, K., Zink, K.-G., di Primio, R. & Horsfield, B. (2009) Data report: geochemical and microbial biomarker investigations of sedimentary successions from the Belgica carbonate mound province in the Porcupine Basin, offshore Ireland. In: Ferdelman, T.G., Kano, A., Williams, T., Henriot, J.-P. and the Expedition 307 Scientists (Eds.): *Proceedings of the Integrated Ocean Drilling Program*, Vol. 307

Maslen, Ercin, Kliti Grice, Julian D. Gale, Christian Hallmann & Brian Horsfield (2009) Crocetane: A potential marker of photic zone euxinia in thermally mature sediments and crude oils of Devonian age. *Organic Geochemistry*, 40, 1, 1-11.

- Ondrak, R., Gaedicke, C., Horsfield, B. (2009): Combining 2D-basin and structural modelling to constrain heat transport along the Muroto Transect, Nankai Trough, Japan. - *Marine and Petroleum Geology*, 26/4, 580-589.
- Schulz, H.-M. & Horsfield, B. (2009): Shale Gas in Europa: Eine neue unkonventionelle Gasressource wie in Nordamerika? *Erdöl-Erdgas-Kohle*, 125/2, 50-55.
- Schulz, H.-M. & Horsfield, B. (2009): Shale Gas: Eine neue unkonventionelle Gas-Ressource. *DVGW energie|wasser-praxis*, 6, 2-5.
- Vu, Thi Anh, Zink, K.-G., Mangelsdorf, K., Sykes, R., Wilkes, H., Horsfield, B. 2009 Changes in bulk properties and molecular compositions within New Zealand Coal Band solvent extracts from early diagenetic to catagenetic maturity levels. *Organic Geochemistry*, 40, 963-977.

2008

- Kroeger, K.F., Ondrak, R., di Primio, R. & Horsfield, B. (2008) A three-dimensional insight into the Mackenzie Basin (Canada): Implications for the thermal history and hydrocarbon generation potential of Tertiary deltaic sequences. *AAPG Bulletin*, 92/2, 225-247.
- Löwner, R., Wächter, J. & Horsfield, B. (eds.) (2008) Vom All zum Kern – Geowissenschaften in Afrika, Zentralblatt für Geologie und Paläontologie Teil I, Allgemeine, Angewandte, Regionales und Historische Geologie, Jahrgang 2007, Heft 3-4, Stuttgart 2008, E. Schweizerbart'sche Verlagsbuchhandlung, Nägele u. Obermiller.
- Mahlstedt, N., Horsfield, B. & Dieckmann, V. (2008) Second order reactions as a prelude to gas generation at high maturity. *Organic Geochemistry*, 39, 8, 1125-1129.
- Paton, D.A., van der Spuy, D., di Primio, R. & Horsfield, B. (2008) Tectonically induced adjustment of passive-margin accommodation space; influence on the hydrocarbon potential of the Orange Basin, South Africa. *AAPG Bulletin*, 92/5, 589-609.
- Theuerkorn, K., Horsfield, B., Wilkes, H., di Primio, R., Lehne, E. (2008) A reproducible and linear method for separating asphaltenes from crude oil. *Organic Geochemistry*, 39, 8, 929-934.
- Vieth, A.; Mangelsdorf, K.; Sykes, R.; Horsfield, B. (2008) Water extraction of coals – potential for estimating low molecular weight organic acids as carbon feedstock for the deep terrestrial biosphere. *Organic Geochemistry*, 39, 8, 985-991.
- Vu Thi Anh, Tiem, Horsfield, Brian, Sykes, Richard (2008) Influence of in-situ bitumen on the generation of gas and oil in New Zealand coals. *Organic Geochemistry*, 39, 11.
- Zink, K.-G., Mangelsdorf, K., Granina, L., Horsfield, B. (2008) Estimation of bacterial biomass in subsurface sediments by quantifying intact membrane phospholipids. *Analytical and Bioanalytical Chemistry*, 390, 885-896.

2007

- Armstroff, A., Wilkes, H., Schwarzbauer, J., Littke, R. & Horsfield, B. (2007) The potential role of redox reactions for the distribution of alkyl naphthalenes and their oxygenated analogues in terrestrial organic matter of Late Palaeozoic age. *Organic Geochemistry* 38, 10, 1692-1714
- Elias, R., Vieth, A., Riva, A., Horsfield, B. & Wilkes, H. (2007) Improved assessment of biodegradation extent and prediction of petroleum quality. *Organic Geochemistry* 38 (2007) 2111-2130
- de Wit, M. & Horsfield, B. (2007) Built on the shoulders of Alfred Wegener and Alex du Toit to apply German precision technology to the geological superlatives of South Africa. *South African Journal of Geology*, 110, 2/3, 165-174.
- de Wit, M. & Horsfield, B. (2007) Special Issue dedicated to Inkaba yeAfrica. *South African Journal of Geology*, 110, 2/3, 163-502 (editors).
- Horsfield, B., Kieft, T. L., Amann, H., Franks, S. G., Kallmeyer, J., Mangelsdorf, K., Parkes, R. J., Wagner, D., Wilkes, H. & Zink, K.-G. (2007) The Geobiosphere. In: U. Harms, Ch. Koeberl & M. D. Zoback (eds) *Continental Scientific Drilling. A Decade of Progress, and Challenges for the Future*. Springer Verlag, 366 p., 163-212.
- Huvenne, V. A. I.; Bailey, W. R., Shannon, P. M., Naeth, J., di Primio, R., Henriot, J. P., Horsfield, B., de Haas, H., Wheeler, A. & Llu-Le Roy, K. (2007) The Magellan mound province in the Porcupine Basin. *International Journal of Earth Sciences*, 96/1, 85-101.
- Naeth, J., di Primio, R., Horsfield, B., Schaefer, R.G. & Krooss, B. (2007) On the relationship between hydrocarbon migration pathways and carbonate mound occurrence in the Porcupine Basin, *International Journal of Earth Sciences*, 96, 1, 199-200.
- John Parkes, R., Peter Wellsbury, Ian D. Mather, Simon J. Cobb, Barry A. Cragg, Ed R.C. Hornibrook & Brian Horsfield (2007) Temperature activation of organic matter and minerals during burial has the potential to sustain the deep biosphere over geological timescales *Organic Geochemistry*, 38, 6, 845-852.
- Paton, D.A., di Primio, R., Kuhlmann, G., van der Spuy, D. & Horsfield, B. (2007) Insights into the Petroleum System Evolution of the southern Orange Basin. *South African Journal of Geology*, 110, 2/3, 261-274.
- Scheck Wenderoth, M., T. Raum, R. Mjelde, J.I. Faleide & B. Horsfield (2007) The transition from the continent to the ocean – a deeper view of the Norwegian margin. *J.Geol.Soc.* 164, 855-868.

2006

- Armstroff, A., Wilkes, H., Schwarzbauer, J., Littke, R. & Horsfield, B., 2006. Aromatic hydrocarbon biomarkers in terrestrial organic matter of Devonian to Permian age. *Palaeogeography, Palaeoclimatology, Palaeoecology* 240, 253-274.

- Cavanagh A.J., di Primio R., Scheck-Wenderoth M. & Horsfield B. (2006) Severity and timing of Cenozoic exhumation in the southwestern Barents Sea. *Journal of the Geological Society, London*, Vol. 163, 5, 761-774.
- de Wit, M. & Horsfield, B. (2006) Inkaba ye Africa Project Surveys Sector of Earth from Core to Space. *Eos*, Vol. 87, No. 11.
- Dieckmann, V., Ondrak, R., Cramer, B. & Horsfield, B. (2006) Deep basin gas: New insights from kinetic modelling and isotopic fractionation in deep-formed gas precursors. *Marine and Petroleum Geology* 23, 183-199.
- di Primio, R. & Horsfield, B. (2006) From petroleum-type organofacies to hydrocarbon phase prediction AAPG Bulletin, 90, 1031-1058.
- Erdmann, M. & Horsfield, B. (2006) Enhanced late gas generation potential of petroleum source rocks via condensation reactions: Evidence from the Norwegian North Sea. *Geochimica et Cosmochimica Acta*, 70, 3943-3956.
- Haberer, R.M., Mangelsdorf, K., Wilkes, H. & Horsfield, B., 2006. Occurrence and palaeoenvironmental significance of aromatic hydrocarbon biomarkers in Oligocene sediments from the Mallik 5L-38 Gas Hydrate Production Research Well (Canada). *Organic Geochemistry*, 37, 519-538.
- Horsfield, B., H.J. Schenk, K. Zink, R. Ondrak, V. Dieckmann, J. Kallmeyer, K. Mangelsdorf, R. di Primio, H. Wilkes, R.J. Parkes, J. Fry & B. Cragg (2006) Living microbial ecosystems within the active zone of catagenesis: Implications for feeding the deep biosphere. *Earth and Planetary Science Letters*, 246, 55-69.
- Kallmeyer, J., K. Mangelsdorf, B. A. Cragg, R. J. Parkes, and B. Horsfield. (2006) Techniques for Contamination Assessment During Drilling for Terrestrial Subsurface Sediments. *Geomicrobiology Journal*, 23, 227-239.
- Keym M., Dieckmann V., Horsfield B., Erdmann M., Galimberti R., Kua L.C., Leith L., Podlaha O. (2006) Source rock heterogeneity of the Upper Jurassic Draupne Formation, North Viking Graben, and its relevance to petroleum generation studies. *Org. Geochem* 37, 220-243.
- Wollenweber, J., Schwarzbauer, J., Littke, R., Wilkes, H., Armstroff, A. & Horsfield, B. (2006) Characterisation of non-extractable macromolecular organic matter in Palaeozoic coals. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 240, 275-304.

2005

- Haberer, R.M., Mangelsdorf, K., Dieckmann, V., Fuhrmann, A., Wilkes, H. & Horsfield, B., 2005: Characterization of the organic matter in lignites of the Kugmallit Sequence (Oligocene) at the JAPEX/JNOC/GSC et al. Mallik 5L-38 gas hydrate production research well. In: Dallimore, S.R., Collett, T.S. (Eds), *Scientific Results from the Mallik 2002 Gas Hydrate Production Research Well*

Program, Mackenzie Delta, Northwest Territories, Canada. Geological Survey of Canada Bulletin 585, p. 11.

Huvenne, V.A.I., Bailey, W. R. , Shannon, P.M., Naeth, J., di Primio, R., Henriët, J.P., Horsfield, B., de Haas, H., Wheeler, A. & Olu-Le Roy, K. (2005) The Magellan mound province in the Porcupine Basin. *International Journal of Earth Sciences*, 96/1, 85-101.

Liguo Hu, Andreas Fuhrmann, Harald S. Poelchau, Brian Horsfield, Zhanwen Zhang, Tiesheng Wu, Yixian Chen & Jinyou Li (2005) Numerical simulation of petroleum generation and migration in the Qingshui sag, western depression of the Liaohe basin, northeast China. *AAPG Bulletin*, 89 (12), 1629-1649.

Mangelsdorf, K., Haberer, R.M., Zink, K.-G., Dieckmann, V., Wilkes, H. & Horsfield, B. (2005) Molecular indicators for the occurrence of a deep microbial communities at the JAPEX/JNOC/GSC et al. Mallik 5L-38 gas hydrate production research well. In: Dallimore, S.R., Collett, T.S. (Eds), *Scientific Results from the Mallik 2002 Gas Hydrate Production Research Well Program, Mackenzie Delta, Northwest Territories, Canada*. Geological Survey of Canada Bulletin 585, p. 11.

Naeth, J., di Primio, R., Horsfield, B., Schaefer, R.G., Shannon, P.M., Bailey, W.R., and Henriët, J.P., 2005. Hydrocarbon seepage and carbonate mound formation: a basin modelling study from the Porcupine Basin (offshore Ireland). *Journal of Petroleum Geology*, 28 (2), 43-62.

Soylu, C., Yalcin, M.N., Horsfield, B., Schenk, H.J, Mann, U. (2005) Hydrocarbon generation Habitat of two Cretaceous carbonate source rocks in SE Turkey. *Journal of Petroleum Geology*, 28 (1), 67-82.

Špičák, A., Förster, A. & Horsfield, B. (2005) Drilling the Eger Rift in Central Europe. *Scientific Drilling, Reports on Deep Earth Sampling and Monitoring*, 1, 44-45.

2004

Dieckmann V., Fowler M. & Horsfield B. 2004 Predicting the composition of natural gas generated by the Duvernay Formation (Western Canada Sedimentary Basin) using a compositional kinetic approach. *Org. Geochem.* 35,7, 845-862.

Fuhrmann, A., Fischer, T., Lücke, A., Brauer, A., Zolitschka, B., Horsfield, B., Negendank, J.F.W., Schleser, G.H. & Wilkes, H. 2004: Late Quaternary environmental and climatic changes in central Europe as inferred from the composition of organic matter in annually laminated maar lake sediments. *Geochem. Geophys. Geosyst.*, 5/11, Q11015.

Fuhrmann, A., B. Horsfield, J. F. Lòpez, L. Hu and Z. Zhang (2004). Organic facies, depositional environment and petroleum generating characteristics of the lacustrine Shahejie Formation, ES4 member, Western Depression, Liaohe Basin (NE China). *Journal of Petroleum Geology* 27/1, 27-46.

2003

- Fuhrmann, A., J. Mingram, A. Lucke, H. Lu, B. Horsfield, J. Liu, J. F. W. Negendank, G. H. Schleser & H. Wilkes (2003) Variations in organic matter composition in sediments from Lake Huguang Maar (Huguangyan), south China during the last 68 ka: implications for environmental and climatic change. *Organic Geochemistry* 34/11, 1497-1515.
- Mangelsdorf, K., R. M. Haberer, K.-G. Zink, H. Wilkes and B. Horsfield (2003) Molecular evidence for a Deep Biosphere at the Mallik Gas Hydrate Research Well, Canada. *Beihefte zum European Journal of Mineralogy* 15, 125.
- Santamaria-Orozco, D. & Horsfield, B. (2003) Gas Generation Potential of Upper Jurassic (Tithonian) Source Rocks in the Sonda de Campeche, Mexico, AAPG Memoir 79, (The Circum-Gulf of Mexico and the Caribbean: Hydrocarbons Habitat, Basin Formation and Plate Tectonics. Ed. Bartollini, C., Buffler R. T. and Brickwede R. F.), Chapter 15, 349-363. American Association of Petroleum Geologists, Tulsa.
- Zink, K. G., H. Wilkes, U. Disko, M. Elvert & B. Horsfield (2003). Intact phospholipids--microbial "life markers" in marine deep subsurface sediments. *Organic Geochemistry* 34/6, 755-769.

2002

- Horsfield, B., Dieckmann, V., Mangelsdorf, K., di Primio, R., Wilkes, H., Schloemer, S. & Schenk, H. (2002) Organic diagenesis: a potential provider of substrates for deep microbial ecosystems. *Geochim et Cosmochim Acta* 66, S1, A342.
- Lückge, A., Horsfield, B., Littke, R. & Scheeder, G. (2002) Organic matter preservation and sulfur uptake in sediments from the continental margins off Pakistan. *Org. Geochem*, 33, 477-488.
- Oldenburg, T.B.P., Wilkes, H., Horsfield, B., van Duin, A.C.T., Stoddart, D. & Wilhelms, A. (2002) Xanthenes - Novel aromatic oxygen-containing compounds in crude oils. *Org. Geochem*, 33, 595-609.
- Sun, Y. Z., Püttmann, W., Kalkreuth, W & Horsfield, B (2002) Petrologic and Geochemical Characteristics of Seam 9-3 and Seam 2, Xingtai Coalfield, Northern China. *Int. J. Coal Geol.*, 49, 251-262.
- Volk, H., Horsfield, B., Mann, U. & Suchý, V. (2002) Variability of petroleum inclusions in vein, fossil and vug cements - a geochemical study in the Barrandian Basin (Lower Palaeozoic, Czech Republic). In: *Advances in Organic Geochemistry 2001* (Edited by Michels et al.). *Organic Geochemistry*, 33/12, 1319-1341.
- Volk, H., Mann, U., Burde, O., Horsfield, B., & Suchy, V. (2002) The use of petroleum inclusions and residual oils to constrain petroleum migration - an example from the Prague Basin (Czech Republic). In: *Australian Organic Geochemistry Conference 2002, Conference Program and Abstracts*, (ed. by John K. Volkman), 29-30, Hobart.

2001

- Holtvoeth, J., Wagner, T., Horsfield, B., Schubert, C.J. & Wand, U. (2001) Late-Quaternary supply of terrigenous organic matter to the Congo deep-sea fan (ODP site 1075): implications for equatorial African paleoclimate. *Geo-Marine Letters*, 21(1), 23-33.
- Waterman, D., Horsfield B., Hall K. & Smith S. (2001) Application of micro-sealed vessel-thermal desorption gas chromatography-mass spectrometry for the organic analysis of airborne particulate matter: linearity, reproducibility and quantification. *Journal of Chrom A*, 912, 143-150

2000

- Dieckmann V., Horsfield B. & Schenk H.J. (2000) Heating rate dependency of petroleum-forming reactions: implications for compositional kinetic predictions. In: *Advances in Organic Geochemistry 1999* (Edited by Yalcin et al.), *Organic Geochemistry*, 31, 1333-1348
- Dieckmann V., Schenk H.J. & Horsfield B. (2000) Assessing the overlap of primary and secondary reactions by closed- versus open-system pyrolysis of marine kerogens, *Journal of Analytical and Applied Pyrolysis*, 56 (1), 33-46.
- di Primio R., Horsfield B. & Guzman-Vega M.A. (2000) Determining the temperature of petroleum formation from the kinetic properties of petroleum asphaltenes. *Nature*, 406, No. 6792, 173-176.
- Fischer, Th., Wilkes, H., Fuhrmann, A., Horsfield, B., Brauer, A., Negendank, J.F.W. & Zolitschka, B. (2000) Lipid biomarkers in sediments of Lake Holzmaar and Lake Meerfelder Maar (Eifel, Germany). *Terra Nostra*, 6, 123-126.
- Fuhrmann, A., Fischer, Th., Wilkes, H., Mingham, J., Negendank, J.F.W., Horsfield, B. & Jiaqi Liu (2000) Macromolecules and biogenic particles in maar lake sediments. *Terra Nostra*, 6, 133-137.
- Volk, H., Mann, U., Burde, O., Horsfield, B. & Suchú, V. (2000) Petroleum inclusions and residual oils; constraints for deciphering petroleum migration. *Journal of Geochemical Exploration*, 69-70, 595-599.
- Waterman D., Horsfield B., Leistner F., Hall K. & Smith S. (2000) Quantification of Polycyclic Aromatic Hydrocarbons in the NIST Standard Reference Material (SRM1649A) Urban Dust Using Thermal Desorption GC/MS. *Anal. Chem.* 72 (15) 3563-3567
- Wilkes, H., Fischer, Th., Fuhrmann, A., Horsfield, B., Brauer, A., Ramrath, A., Negendank, J.F.W. (2000) Organic matter in maar lake sediments as an indicator of environmental and climatic change. *Terra Nostra*, 6, 511-514.

1999

Boreham C.J., Horsfield B. and Schenk H.J. (1999) Predicting the quantities of oil and gas generated from Australian Permian coals, Bowen Basin using pyrolysis methods. *Mar. Petrol. Geol.* 16, 165-188.

Hall P.A., Watson A.F.R., Garver G.V., Hall K., Smith S., Waterman D. & Horsfield B. (1999) An investigation of micro-scale sealed vessel thermal extraction-gas chromatography-mass spectrometry (MSSV-GC-MS) and micro-scale sealed vessel pyrolysis-gas chromatography-mass spectrometry applied to a standard reference material of an urban dust/organics. *The Science of the Total Environment* 235, 269-276.

Rantitsch G., Jochum J., Sachsenhofer R.F., Russegger B., Schroll E. & Horsfield B. (1999) Hydrocarbon-bearing inclusions in the Drau Range (Eastern Alps, Austria): Implications for the genesis of the Bleiberg Type Pb-Zn deposits. *Mineralogy and Petrology* 65, 141-159

1998

Clegg H., Wilkes H., Oldenburg T., Santamaria-Orozco D. & Horsfield B. (1998) Influence of Maturity on Carbazole and Benzocarbazole Distributions in Crude Oils and Source Rocks from the Sonda de Campeche, Gulf of Mexico. In: *Advances in Organic Geochemistry (1997)* (Edited by Horsfield B. et al.) *Org. Geochem.* 29, 183-194.

Clegg H., Wilkes H., Sinninghe-Damsté J. & Horsfield B. (1998) Effect of artificial maturation on carbazole distribution from a carbonate marine source rock. *Org. Geochem.* 29, 1953-1960.

Dieckmann, V., Horsfield, B., Schenk, H.J. & Welte, D.H. (1998) Kinetics of petroleum generation and cracking by programmed-temperature closed-system pyrolysis of Posidonia Shale. *Fuel*, 77, 23-31.

Horsfield B., Clegg H., Wilkes H. & Santamaria-Orozco D. (1998) Effect of maturity on carbazole distributions in petroleum systems: new insights from the Sonda de Campeche, Mexico, and Hils Syncline, *Naturwissenschaften*, 85, 233-237

Horsfield B., Leistner F., Dieckmann V., Erdmann M., Santamaria-Orozco D. & Schenk H.J. (1998) Predicting Petroleum Compositions: New Insights from MSSV Pyrolysis coupled with Kinetic and PVT Models. Extended Abstract Latin American Congress on Organic Geochemistry, October 18-21, Margarita Island, Venezuela.

Horsfield B., Radke M., Schaefer R.G. & Wilkes H. (1998) *Advances in Organic Geochemistry (1997)*, Part I Petroleum Geochemistry and Part II Biogeochemistry *Org. Geochem.* 29, 1-3 and 4-6 (Editors).

Santamaria-Orozco D., Horsfield B., di Primio R., & Welte D.H. (1998) Influence of maturity on distributions of benzo- and dibenzothiophenes in Tithonian source rocks and crude oils, Sonda de Campeche, Mexico. *Org. Geochem.* 28, 423-439.

Schenk, H.J. & Horsfield B. (1998) Using natural maturation series to evaluate the utility of parallel reaction kinetics models: an investigation of Toarcian shales and Carboniferous coals, Germany. In: *Advances in Organic Geochemistry (1997)* (Edited by Horsfield B. et al.). *Org. Geochem.* 29, 137-154.

Sinninghe-Damsté J.S., Kohnen M.E.L. & Horsfield B. (1998) Origin of low molecular weight alkylthiophenes in pyrolysates of sulphur-rich kerogens as revealed by micro-scale sealed vessel pyrolysis. *Org. Geochem.* 29, 1891-1903.

Wilkes H., Clegg H., Disko U., Willsch H. & Horsfield B. (1998) Fluoren-9-ones and carbazoles in the Posidonia Shale, Hils Syncline, northwest Germany. *Fuel* 77, 657-668

Wilkes H., Disko U. & Horsfield B. (1998) Aromatic aldehydes and ketones in rock extracts from the Posidonia Shale, Hils Syncline, Germany. In: *Advances in Organic Geochemistry (1997)* (Edited by Horsfield B. et al.). *Org. Geochem.* 29, 107-117.

1997

Bowler B.F.J., Larter S.R., Clegg H., Wilkes H., Horsfield B. & Li M. (1997) Dimethylcarbazoles in crude oils: comment on "Liquid Chromatographic Separation Schemes for Pyrrole and Pyrodine Nitrogen Aromatic Heterocycle Fractions from Crude Oils Suitable for Rapid Characterization of Geochemical Samples" *Anal. Chem.* 69, 3128-3129.

Clegg H., Horsfield B., Stasiuk L., Fowler M. & Vliex M. (1997) Geochemical characterisation of organic matter in Keg River Formation (Elk Point Group, Middle Devonian), La Crete Basin, Western Canada *Org. Geochem.* 26, 627-643.

Clegg H., Wilkes H., & Horsfield B. (1997) Carbazole distributions in carbonate and clastic source rocks. *Geochim. Cosmochim. Acta* 61, 5335-5345.

di Primio R. & Horsfield B. (1997) Predicting the Generation of Heavy Oils in Carbonate/Evaporitic Environments using Pyrolysis Methods. *Org. Geochem.* 24, 10/11, 999-1016

Germann A., Jochum J., Friedrich G. & Horsfield B. (1997) Die sandsteingebundenen Pb-Zn-Vorkommen von Maubach und Mechernich – ein Beispiel thermochemischer Sulfatreduktion. *Exkurs. Fuhre Oberrhein. Geol. Ver. 118 Jahr. Tag.*, 13-29.

Germann A., Jochum J., Friedrich G. & Horsfield B. (1997) The sandstone-hosted lead-zinc deposits of Maubach/Mechernich – a new genetic model based on thermochemical silfate reduction. *Zbl. Geol. Paläont. Teil I*, 1995, H. 11/12, 1133-1139.

Horsfield B. (1997) The bulk composition of first-formed petroleum in source rocks. In: *Petroleum and Basin Evolution* (Edited by Welte D.H., Horsfield B. & Baker D.R.), 335-402, Springer Verlag, Heidelberg

- Jochum J., Horsfield B. & Bechtel A. (1997) Kohlenwasserstoffe in variskischer und postvariskischer Buntmetallmineralisation des Rheinischen Schiefergebirges --Herkunft und Einfluß auf die Lagerstättenbildung. *Berichte der Deutschen Mineralogischen Gesellschaft, Beih. Z. Eur. J. Mineral.* 9,1, 171.
- Poelchau, H.S., Baker, D.R., Hantschel, Th., Horsfield, B. & Wygrala, B. (1997) Basin simulation and the design of the conceptual basin model. In: *Petroleum and Basin Evolution* (Edited by Welte D.H., Horsfield B. & Baker D.R.), 3-70, Springer Verlag, Heidelberg
- Radke M., Horsfield B., Littke R. & Rullkötter J. (1997) Maturation and petroleum generation. In: *Petroleum and Basin Evolution* (Edited by Welte D.H., Horsfield B. and Baker D.R.), 169-230, Springer Verlag, Heidelberg
- Schenk H.J., di Primio R. & Horsfield B. (1997) The conversion of oil into gas. Part 1: Comparative kinetic investigation of gas generation from crude oils of lacustrine, marine and fluviodeltaic origin by programmed-temperature closed-system pyrolysis. *Org. Geochem.* 26, 467-481.
- Schenk H.-J., Horsfield B., Krooß B., Schaefer R.G. & Schwochau K. (1997) Kinetics of petroleum formation and cracking. In: *Petroleum and Basin Evolution* (Edited by Welte D.H., Horsfield B. and Baker D.R.), 231-270, Springer Verlag, Heidelberg
- Welte D.H., Horsfield B & Baker D.R. (1997) *Petroleum and Basin Evolution* Springer Verlag, Heidelberg, 535pp.
- Willsch H, Clegg H. Horsfield B., Radke M. & Wilkes H. (1997) Liquid chromatographic separation of sediment, rock and coal extracts and crude oil into compound classes. *Anal. Chem.* 69, 4203-4209
- Schenk H.J. & Horsfield B. (1997) Kinetics of Petroleum Generation: Applications and Limitations. Kinetics of petroleum generation: applications and limitations. *Zbl. Geol. Paläont. Teil I*, (1995), H. 11/12, 1113-1117.

1996

- Horsfield B. & Claypool G. (1996) Origin of Natural Gases. *Org. Geochem.* 24, 947-1016 (Guest Editors).
- Horsfield B., R. di Primio, H-J. Schenk, A-Y. Huc, C. Magnier, F. Béhar, A. Prinzhofer, S.R. Larter, B. Bennett, G. Pusch, J.R. Weber, V. Reitenbach, R. Dawe, M. Pingo-Almada, H. Skurdal, J.I. Jensen, Ø. Sylta, O. Frigård, E. H. Stenby & S. Gommesen (1997) The formation and migration of thermogenic gases and condensates in carrier/reservoir systems. In: *The Strategic Importance of Oil and Gas Technology. Proceedings of the 5th European Union Hydrocarbons Symposium, Edinburgh, November 26-28, (1996), Centre for Marine and Petroleum Technology Ltd (Aberdeen), 1200-1213*

Muscio G.P.A. & Horsfield B. (1996) Neof ormation of Inert Carbon during the Natural Maturation of a marine source rock; Bakken Shale, Williston Basin. *Energy and Fuels* 10, 10-18

Sachsenhofer R.F., Curry D.J., Horsfield B., Rantitsch G. & Wilkes H. (1996) Characterisation of organic matter in late Cretaceous black shales of the Eastern Alps (Kainach Gosau-Group, Austria) *Org. Geochem.* 23, 915-929.

1995

di Primio R. & Horsfield B. (1995) Predicting the Generation of Heavy Oils in Carbonate/Evaporitic Environments using Pyrolysis Methods. In: *Organic Geochemistry: Developments and Applications to Energy, Climate, Environment and Human History. Selected Papers from the 17th International Meeting on Organic Geochemistry, Donostia-San Sebastián, The Basque Country, Spain* (Edited by Grimalt J.O. & Dorronsoro C.), AIGOA, Donostia-San Sebastian, 410-412.

Francu J., Radke M., Horsfield B., Schaefer R.G., Willsch, H. & Leistner F. (1995) Organic facies and maturity of the Jurassic and Paleogene source rocks underlying the West Carpathians and their possible relationship to oils in the SE Czech Republic. In: *Organic Geochemistry: Developments and Applications to Energy, Climate, Environment and Human History. Selected Papers from the 17th International Meeting on Organic Geochemistry, Donostia-San Sebastián, The Basque Country, Spain* (Edited by Grimalt J.O. & Dorronsoro C.), AIGOA, Donostia-San Sebastian, 74-76.

Germann A., Jochum, J., Friedrich G. & Horsfield B. (1995) The sandstone-hosted lead-zinc deposits of Maubach/Mechernich - a case history of thermochemical sulphate reduction. *Third Biennial SGA Meeting (Society for Geology Applied to Mineral Deposits). Mineral Deposits: From their Origin to their Environmental Impacts. Prague, Czech Republic, August 28-31, 1995.*

Idiz E., Krooß B.M., Horsfield B., Littke R. & Müller B. (1995) Generation of hydrocarbon gases and molecular nitrogen from coals. In: *Organic Geochemistry: Developments and Applications to Energy, Climate, Environment and Human History. Selected Papers from the 17th International Meeting on Organic Geochemistry, Donostia-San Sebastián, The Basque Country, Spain* (Edited by Grimalt J.O. & Dorronsoro C.), AIGOA, Donostia-San Sebastian, 1089-1091.

Jochum J., Germann A., Friedrich G., Horsfield B. & Pickel W. (1995) Mechanical decrepitation coupled with gas chromatography - a new method for the determination of hydrocarbons in ore minerals. *Third Biennial SGA Meeting (Society for Geology Applied to Mineral Deposits). Mineral Deposits: From their Origin to their Environmental Impacts. Prague, Czech Republic, August 28-31, 1995.*

Lückge A., Horsfield B., Lallier-Vergès E., Rullkötter J. & Littke R. (1995) Organic matter preservation in immature sediments below High-Productivity-Zones along continental margins (Peru and Oman Upwelling areas). In: *Organic Geochemistry: Developments and Applications to Energy, Climate, Environment and Human History. Selected Papers from the 17th International Meeting on Organic Geochemistry, Donostia-San Sebastián, The Basque Country, Spain* (Edited by Grimalt J.O. & Dorronsoro C.), AIGOA, Donostia-San Sebastian, 869-871.

- Mann U., Hertle M., Horsfield B., Radke M., Schenk H.J. & Yalcin M.N. (1995) Petrographical, organic geochemical and petrophysical characterisation of upper Carboniferous coals from well K20/G, Zonguldak Basin, NW Turkey. In: Zonguldak Basin Research Wells -I: K20/G (Edited by Yalcin M.N. & Gürdal G.), Special Publication Tubitak, MAM, 133-165
- Richnow H.H., Seifert R., Kästner M., Mahro B., Horsfield B., Tiedgen U., Böhm S. & Michaelis W. (1995) Rapid screening of PAH-Residues in Bioremediated Soils. *Chemosphere* 31, 8, 3991-3999.
- Rullkötter J., Littke R., Heber G., Horsfield B., Jendrzewski L., Noto H., Radke M. & Schaefer R.G. (1995) Organic matter in Upper Barremian to Lower Aptian sediments in the Lower Saxony Basin, NW Germany (Wiechendorf 1/86 borehole) *Geol.Jb.* 141 563-585, Hannover 1995.
- Santamaria-Orozco, D., di Primio R., Pickel W., Holguin N. & Horsfield B. (1995) Organic facies and maturity of Tithonian source rocks from the Sonda de Campeche, Mexico. In: *Organic Geochemistry: Developments and Applications to Energy, Climate, Environment and Human History. Selected Papers from the 17th International Meeting on Organic Geochemistry, Donostia-San Sebastián, The Basque Country, Spain* (Edited by Grimalt J.O. & Dorronsoro C.), AIGOA, Donostia-San Sebastian, 152-154.
- Schenk H.J. & Horsfield B. (1995) Simulating the conversion of oil into gas in reservoirs: the influence of frequency factors on kinetic predictions. In: *Organic Geochemistry: Developments and Applications to Energy, Climate, Environment and Human History. Selected Papers from the 17th International Meeting on Organic Geochemistry, Donostia-San Sebastián, The Basque Country, Spain* (Edited by Grimalt J.O. & Dorronsoro C.), AIGOA, Donostia-San Sebastian, 1102-1103.
- Schwark L., Xia J., Honold M., Slach J., Leythaeuser D. & Horsfield B. (1995) Maturity assessment for organic matter derived from the permian Staßfurt Carbonate (CA2) source rock in Thuringia and Brandenburg, East Germany - Problems related to facies variation and migration.). In: *Organic Geochemistry: Developments and Applications to Energy, Climate, Environment and Human History. Selected Papers from the 17th International Meeting on Organic Geochemistry, Donostia-San Sebastián, The Basque Country, Spain* (Edited by Grimalt J.O. & Dorronsoro C.), AIGOA, Donostia-San Sebastian, 299-301.

1994

- Horsfield B., Curry D.J., Bohacs K., Littke R., Rullkötter J., Schenk H.J., Radke M., Schaefer R.G., Carroll A.R., Isaksen G. & Witte E.G. (1994) Organic geochemistry of freshwater and alkaline lacustrine environments, Green River Shale, Wyoming. In: *Advances in Organic Geochemistry 1993*. Edited by Öygard K. et al. *Org. Geochem.* 22, 3-5, 415-440.
- Horsfield B. & Rullkötter J. (1994) Diagenesis, catagenesis and metagenesis. In: *The Petroleum System from Source to Trap*. Edited by Magoon L. and Dow, W.G. *AAPG Memoir* 60, 189-199.
- Jochum J., Friedrich G., Germann A., Horsfield B., Leistner F. & Pickel W. (1994) Occurrence of hydrocarbons in ore minerals of the Triassic sandstone-hosted lead-zinc deposits Maubach and

Mechernich, Germany. In: Economic Geology in Europe and Beyond II: Models for Mineral Deposits in Sedimentary Basins. Edited by R.P. Foster, 25-27, BGS/IMM, Nottingham and London.

Muscio G., Horsfield B. & Welte D.H. (1994) Occurrence of thermogenic gas in the immature zone – implications from the Bakken in-source reservoir system. In: Advances in Organic Geochemistry. Edited by Öygard K. et al. *Org. Geochem.* 22, 3-5, 461-476.

1993

Andresen, P., Mills, N., Schenk, H.J. & Horsfield, B. (1993) The importance of kinetic parameters in modelling oil and gas generation - a case study in 1D from well 2/4-14. In: Basin modelling; Advances and applications edited by Doré A.G., Augustson J.H., Hermanrud C., Steward D.J. & Sylta O. Norwegian Petroleum Society Special Publication 3, 563-571.

di Primio R., Horsfield B., Krooss B. & Leythaeuser D. (1993) Experimental simulation of hydrocarbon generation and expulsion by open system hydrous pyrolysis of a sulphur-rich marine source rock. In: Organic Geochemistry. Poster sessions from the 16th International Meeting on Organic Geochemistry, Stavanger 1993 (Edited by K. Oygard), Falch Hurtigtrykk, Oslo, 220-223.

Hall K., Horsfield B. & Mills N. (1993) On the feasibility of coupling microscale sealed vessel (MSSV) pyrolysis, gas chromatography and isotope ratio mass spectrometry for studying the thermal degradation of crude oil into natural gas. In: Organic Geochemistry. Poster sessions from the 16th International Meeting on Organic Geochemistry, Stavanger 1993 (Edited by K. Oygard), Falch Hurtigtrykk, Oslo, 794-797.

Horsfield B., Düppenbecker, S.J., Schenk, H.J. & Schaefer, R.G. (1993) Kerogen typing concepts designed for the quantitative geochemical evaluation of petroleum potential. In: Basin modelling; Advances and applications edited by Doré A.G., Augustson J.H., Hermanrud C., Steward D.J. & Sylta O. Norwegian Petroleum Society Special Publication 3, 243-249.

Horsfield B., Littke R., Schenk H.J., Mann U. & Curry D.J. (1993) Organic geochemistry of freshwater and alkaline lacustrine environments, Green River Shale, Wyoming. Part II: Kerogen characterisation and source rock potential. In: Organic Geochemistry. Poster sessions from the 16th International Meeting on Organic Geochemistry, Stavanger (1993) (Edited by K. Oygard), Falch Hurtigtrykk, Oslo, 321-324.

Larter, S.R. & Horsfield, B. (1993) Determination of Structural Components of Kerogen using Analytical Pyrolysis Methods. In: Organic Geochemistry (Edited by Engel, M. & Macko, S.). Plenum Publishing Corporation, 271-287.

Schenk H.J. & Horsfield B. (1993) Kinetics of Petroleum Generation from Open versus Closed System Pyrolysis Experiments. *Geochim. Cosmochim. Acta* 57, 623-630.

Schenk H.J., Horsfield B. & Witte E.G. (1993) Organic geochemistry of freshwater and alkaline lacustrine environments, Green River Shale, Wyoming. Part III: Comparative characterisation of selected

shale samples by various spectroscopic and pyrolysis techniques including kinetic parameters. In: Organic Geochemistry. Poster sessions from the 16th International Meeting on Organic Geochemistry, Stavanger (1993) (Edited by K. Oygard), Falch Hurtigtrykk, Oslo, 324-327.

1992

Bharati, S., Larter, S.R. & Horsfield, B. (1992) The Unusual Source Potential of the Cambrian Alum Shale in Scandinavia as Determined by Quantitative Pyrolysis Methods. In: Generation, Accumulation and Production of Europe's Hydrocarbons (Edited by Spencer, A.M.), Special Publication of the European Association of Petroleum Geoscientists No. 2., 103-110. Springer-Verlag Berlin Heidelberg.

Horsfield, B., Bharati, S., Larter, S.R., Leistner, F., Littke, R., Schenk, H.J. & Dypvik, H. (1992) On the atypical petroleum-generating characteristics of alginite in the Cambrian Alum Shale. In: M. Schidlowski et al (eds) Early Organic Evolution: Implications for Mineral and Energy Resources", 257-266, Springer-Verlag Berlin Heidelberg

Rullkötter, J., Littke, R., Radke, M. & Horsfield, B. (1992) Petrography and geochemistry of organic matter in Triassic and Cretaceous deep sea sediments from the Wombat and Exmouth Plateaus and nearby abyssal plains off Northwest Australia. In: Rad, U., Haq, B.U. et al (eds) Proc. ODP, Sci. Results, 122, 317-333.

1991

Horsfield B. & Düppenbecker, S.J. (1991) The decomposition of Posidonia Shale and Green River Shale kerogens using Microscale Sealed Vessel (MSSV) pyrolysis. J. Anal. Appl. Pyrolysis 20, 107-123.

Horsfield, B., Heckers, J., Leythaeuser, D., Littke, R. & Mann, U. (1991) A study of the Holzener Asphaltkalk, Northern Germany: Observations regarding the distribution, composition and origin of organic matter in an exhumed petroleum reservoir. Mar. Petrol. Geol. 8, 198-211.

van Aarsen, B.G.K., de Leeuw, J.W. & Horsfield, B. (1991) A comparative study of three different pyrolysis methods used to characterise a biopolymer isolated from fossil and extant Dammar resins. J. Anal. Appl. Pyrolysis 20, 125-139.

Muscio, G.P.A., Horsfield, B. & Welte, D.H. (1991) Compositional changes in the macromolecular organic matter (kerogens, asphaltenes and resins) of a naturally matured source rock sequence from northern Germany as revealed by pyrolysis methods. In: Organic Geochemistry Advances and Applications in the Natural Environment (Edited by Manning D.A.C.), 447-449, Manchester University Press, Manchester and New York.

1990

- Dueppenbecker, S. & Horsfield, B. (1990) Compositional information for kinetic modelling and petroleum type prediction. In: *Advances in Organic Geochemistry 1989*. Edited by Durand B. & Béhar F. Pergamon Journals Oxford 259-266.
- Field, Madagascar. In: *Advances in Organic Geochemistry 1989*. Edited by Durand B. & Béhar F. Pergamon Journals Oxford 235-246.
- Horsfield, B. (1990) Evaluating kerogen type according to source quality, compositional heterogeneity and thermal lability. *Review of Palaeobotany and Palynology* 65, 357-365.
- Horsfield, B., Larter, S.R., Düppenbecker, S. & Daines, S. 1990. Gas-oil ratios in source rocks. *Bull. Am. Assoc. Petrol. Geol.*, 74, 677.
- Littke, R., Horsfield, B., Radke, M., Rullkötter, J., Schaefer, R.G. & Leythaeuser, D. (1990) Comparative geochemical and petrological study of Carboniferous coals and dispersed terrigenous organic matter from Northwest Germany. A.C.S. Meeting Abstract, Boston.
- Ramanampisoa, L., Radke, M., Horsfield, B., Littke, R., Rullkötter, J. & Schaefer, R.G. (1990) Organic-geochemical characterisation of sediments from the Sakoa Coal

1989

- Horsfield, B. (1989) Practical criteria for classifying kerogens: Some observations from pyrolysis-gas chromatography. *Geochim. Cosmochim. Acta*, 53, 891-901.
- Horsfield, B., Disko, U. & Leistner, F. (1989) The micro-scale simulation of maturation: Outline of a new technique and its potential applications. *Geologische Rundschau* 78/1, 361-374.
- Horsfield, B. & Larter, S.R. (1989) Practical Kerogen Typing for Petroleum Exploration. *Bull. Am. Assoc. Petrol. Geol.*, 73, 365.
- Littke, R., Horsfield, B. & Leythaeuser, D. (1989) Kohlenwasserstoffgenese und Migration in karbonischen Kohlen in Abhängigkeit von Maceralzusammensetzung und Reife. *Erdöl Erdgas Kohle*, 104, 184.
- Littke, R., Horsfield, B. & Leythaeuser, D. (1989) Hydrocarbon distribution in coals and dispersed organic matter of different maceral compositions and maturities. *Geologische Rundschau* 78/1, 391-410.
- Tegelaar, E.W., Horsfield, B. & de Leeuw, J.W. (1989) Insoluble, Non-Hydrolyzable Highly Aliphatic Biopolymers from Algal Cell Walls and Vascular Plant Cuticles and Barks as Sources of N-Alkanes in crude oil. *Bull. Am. Assoc. Petrol. Geol.* 73, 418.
- Tegelaar, E.W., Matthezing, R.M., Jansen, B.H., Horsfield, B. & de Leeuw, J.W. (1989) Possible origin of n-alkanes in high-wax crude oils. *Nature* 342, No. 6249, 529-531.

1988

Horsfield, B., Disko, U. & Leistner, F. (1988) Simulating and quantifying the maturation of kerogens and asphaltenes using a novel microanalytical approach. *TERRA cognita*, 8, 26.

Horsfield, B. & Littke, R. 1988. On the thermal lability of n-alkyl groups in alginite kerogens. *TERRA cognita*, 8, 218.

Littke, R., Horsfield, B. & Leythaeuser, D. (1988) Hydrocarbon distribution in coals and dispersed organic matter of different maceral compositions and maturities. *TERRA cognita*, 8, 27

Rullkötter, J., Leythaeuser, D., Horsfield, B., Littke, R., Mann, U., Müller, P.J., Radke, M., Schaefer, R.G., Schenk, H.-J., Schwochau, K., Witte, E.-G. & Welte, D.H. (1988) Organic matter maturation under the influence of a deep intrusive heat source: a natural experiment for quantitation of hydrocarbon generation and expulsion from a petroleum source rock. (Toarcian Shale, Northern Germany). In: *Advances in Organic Geochemistry 1987*. Edited by Mattavelli, L. & Novelli, L. 847-856, Pergamon Journals, Oxford.

1987

Horsfield, B., Yordy, K.L. & Crelling, J.C. (1987) Determining the petroleum-generating potential of coal using organic geochemistry and organic petrology. In: *Advances in Organic Geochemistry 1987*. Edited by Mattavelli, L. & Novelli, L., 121-129, Pergamon Journals, Oxford.

1986

Reed, J., Illich, H.A. & Horsfield, B. (1986) Biochemical evolutionary significance of Ordovician oils and their source. In: *Advances in Organic Geochemistry 1985*. Edited by Leythaeuser, D. & Rullkötter, J., 347-358, Pergamon Journals, Oxford.

1984

Horsfield, B. (1984) Pyrolysis studies and petroleum exploration. In: *Advances in Petroleum Geochemistry* (Ed. Brooks, J. & Welte, D.H.) Academic 247-298.

Horsfield, B. & McLimans, R.K. (1984) Geothermometry and geochemistry of aqueous and oil-bearing fluid inclusions from Fateh Field, Dubai. In: *Advances in Organic Geochemistry 1983*. Edited by Schenck, P. et al. Pergamon Journals, Oxford, 733-740.

Horsfield, B. & Woods, R.A. 1984. The rapid removal of contaminants from drill cuttings. *J. Sed. Petrol.*, 54. 637-638.

1983

Dembicki, H., Horsfield, B. & Ho, T.T.Y. (1983) Source rock evaluation by pyrolysis-gas chromatography, A.A.P.G. Bull., 67, 1094-1103.

Horsfield, B., Dembicki, H. & Ho, T.T.Y. (1983) Some potential applications of pyrolysis to basin studies. J. Geol. Soc. Lond., 140, 431-443.

Earlier than 1983

Barker, C. & Horsfield, B. (1982) Mechanical versus thermal cause of abnormally high pore pressure in shales: discussion. A.A.P.G. Bull. 66, 99-100.

Ho, T.T.Y., Dembicki, H. & Horsfield, B. (1982) Pyrolysis-gas chromatography as an exploration tool for geochemical evaluation of source rock potential. A.A.P.G. Bull. 66, 562.

McLimans, R.K. & Horsfield, B. (1982) Applications of fluid inclusion studies to petroleum migration: Fateh Field, Dubai. 183rd ACS Meeting, Las Vegas (Abstract).

Horsfield, B. & Douglas, A.G. (1980) The influence of minerals on the pyrolysis of kerogens. Geochim. Cosmochim. Acta 44, 1119-1131.

Larter, S.R., Horsfield, B. & Douglas, A.G. (1977). Pyrolysis as a possible means of determining the petroleum-generating potential of sedimentary organic matter. In: Analytical Pyrolysis (Eds. Jones C.E.R. & Cramers C.A.) 189-202.