EGI Energy & Geoscience Institute
AT THE UNIVERSITY OF UTAH

Since 1972

Sylvain Garel-Laurin, PhD

Affiliate Scientist

Dr. Sylvain Garel is an organic geochemist and sedimentologist with experience in conventional and unconventional petroleum exploration. After completing a Ph.D. on 'Environmental Consequences of the Paleocene-Eocene Thermal Maximum' at Paris Université Pierre et Marie Curie in 2013, Sylvain worked within the exploration department of Total as a postdoctoral researcher before working as an independent consultant.

During his Ph.D., Sylvain used several organic geochemistry proxies along with sedimentology and palynofacies observations to produce an integrated schema of paleoenvironmental changes at the Paleocene-Eocene boundary for Northwest Europe. As a petroleum geochemist, Sylvain focused on source-rock evaluation of Central and South Atlantic Basins and the relationship between paleoenvironmental settings and source-rock properties. He also worked on oil-SR correlation using biomarkers for European and African basins. The last couple of year, Sylvain helped to develop a specific workflow combining palynofacies, Rock-Eval, kinetic and biomarker data that allows a precise assessment of source-rock potential.

As an independent consultant, Sylvain is involved in several academic and industrial projects including a review of Central & North Atlantic Source-Rocks with EGI and a paleoenvironmental and characterization of the Autun Basin (France) and its unconventional system with the Sorbonne Université. Sylvain is a board member of the French Researcher on Organic Geochemistry association (FROG) since 2016. He is a member of the European Association of Organic Geochemists (EAOG).

Research Interests

- Source-Rock geochemistry
- Palynofacies
- Organic geochemistry
- Biomarkers
- Study of Anoxic Ocean Events and associated black shales
- Paleoenvironmental and paleoclimatic reconstructions

Selected Publications:

Behar, F., Delhaye-Prat, V., Chaboureau, A.-C., **Garel, S.**, 2018. Detritic input quantification in lacustrine petroleum systems: example of the pre-salt source rocks from the Lower Congo Basin (Congo). AAPG International Conference & Exhibition 2018, Cape Town. Abstract.

Chaboureau, A.-C., **Garel, S.**, Mourlot, Y., Behar, F., 2018. New insights of the Cretaceous source rock potential in the Central Atlantic Ocean based on palynofacies analyses and Rock Eval data. AAPG Annual Conference, Salt Lake City 2018. Abstract.

Garel, S., Behar, F., Schnyder, J., Baudin, F., 2017. Control of paleoenvironmental settings on primary fluids characteristics of lacustrine source rocks in the Autun Permian Basin (France). In Baudin, F., & Wendebourg, J. (Eds.), Petroleum Source Rocks. Bull. Soc. Géol. Fr., 188, 29.

Garel, S., Quesnel, F., Jacob, J., Roche, E., Le Milbeau, C., Dupuis, C., Boussafir, M., Baudin, F., Schnyder, J., 2014. High frequency floral changes at the Paleocene-Eocene Boundary revealed by comparative biomarkers and palynological studies. Org. Geoch. 77, 43 – 58.

Garel, S., Schnyder, J., Jacob, J., Dupuis, C., Boussafir, M., Le Milbeau, C., Storme, J.-Y., Iakovleva, A. I., Yans, J., Baudin, F., Fléhoc, C., Quesnel, F., 2013. Paleohydrological and paleoenvironmental changes recorded in terrestrial sediments of the Paleocene–Eocene boundary (Normandy, France). Palaeogeogr. Palaeoclimatol. Palaeoecol. 373, 184 – 199.

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