



• **Stable Isotopes (O, C, B, Li) and trace elements (Sr, Mg, Na, Li) geochemistry in Deep-Sea Scleractinian Corals: what can we really learn?**

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In the late 1990s, high-resolution seismic surveys revealed the existence of biogenic geological structures along the Irish continental margin (Porcupine Seabight and Rockall Trough): the cold-water coral mounds. One of their most interesting feature is the presence of live deep-sea corals or alternatively found as debris. From there, the question of the genesis and evolution of these structures arose.

The aragonitic nature of their skeleton, the concentration of trace elements (U, Ba, Sr, Mg, Li, Nd) as well as their distribution along the continental margins or the open ocean, made them attractive to solve paleoceanographic questions. Thus the vision of mound genesis, the nature of the water masses involved in the cold-water coral mounds growth or reservoir ages of intermediate waters have evolved considerably over the past decade. However, the use of stable isotopes (C-O-B) to estimate temperatures or pH values of surrounding waters is still a challenge if cares are not taken.

This paper will highlight the main features of stable isotopes of these corals as well as the uses of precautions to provide relevant data.