



Biogeochemistry of Cu and Zn isotopes in sediments and bivalves mollusks from coastal systems of France

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The main purpose of this work is assessing the Cu and Zn isotopes as environmental indicators in French coastal environments with different scale sizes, historical pollution (electroplating, industrial, urban, military or port activities), concentrations levels and metal sources (punctual versus diffuse). To this end, we determined Cu and Zn stable isotopes in sediments, suspended particulate matter and bivalve mollusks collected along the French coast. Results of sediments indicate source mixing as the main controlling factor, while in the soft tissues of bivalves are influenced by biological, geochemical and sources of these elements. This work demonstrates the applicability of Cu and Zn isotopes to deconvolve past and current anthropogenic inputs to the coastal systems using complementary information of biotic and abiotic matrices.