



## **Boron isotope study on anthropogenic influenced river and groundwater**

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Boron is used as a conservative tracer in aqueous environment because of its high solubility predominantly as boric acid, its natural presence in nearly all water, and because of its occurrence in anthropogenic influenced water systems. Particularly the latter one is in focus on studies of anthropogenic impacts on urban water. To understand the interaction of urban surface and groundwater, boron and particularly their stable isotopes,  $^{11}\text{B}$  and  $^{10}\text{B}$ , are increasingly applied as tracer and marker for urban geochemical processes.

Here, we present a comparable study on the urban influenced Hérault watershed, France, and on the urban area of the city of Leipzig, Germany, with the aim to use boron and its isotopes as tracer for anthropogenic influences. At both sites, a multi-isotope approach is used analysing the stable isotopes of H/O from water, S/O from sulphate, and boron isotopes in connection with hydrochemical data. Results of water samples from rivers, groundwater wells, and effluents from sewage water treatment plants are discussed in order to find relations of anthropogenic impacts on the water system.