



## Paleomagnetism of Portuguese stalagmites: advances and perspectives

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Speleothems are secondary mineral deposits formed in caves and may represent excellent recorders of variations of the Earth's magnetic field. Magnetic studies of speleothems provide two important forms of data: i) continuous and high-resolution records of short-term variations of the geomagnetic field (GMF), and conversely the use of paleomagnetism as a dating tool of speleothems; and ii) high-resolution records of climate variability by linking rock magnetic properties to climate and environmental forcing parameters acting on soils. However, the use of speleothem magnetism as a dating tool and paleo-climate archive still requires a great deal of maturation before being comparable to traditional techniques. Here we present a review of the paleomagnetic records of speleothems from Portugal obtained during the last five years and propose a new approach to date speleothem based on paleomagnetic data. We also present preliminary results and future investigations in the framework of an ongoing research project (Speleothems as magnetic, environmental and paleo-fire archives; ref. PTDC/CTA-GEO/0125/2021)

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