

## **Analysis of microorganisms-mineral interaction in the deep subsurface of the Iberian Pyrite Belt**

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Despite being considered an extreme environment due to their oligotrophic conditions, different studies have shown that life in the deep subsurface is abundant and diverse. Using Confocal Laser Scanning microscopy/Fluorescent in situ Hybridization (FISH) and confocal Raman microscopy we analyzed the association between microorganisms and the mineral substrates existing in the subsurface of the Iberian Pyrite Belt (IPB). A strong correlation detected between members of the *Acidovorax* genus and pyrite suggest that this nitrate reducing iron oxidizing bacteria is involved in the anaerobic oxidation of metal sulfides in the subsurface of the IPB.