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'Tracking metabolisms on early Earth with metals'

Wednesday, 9th March 2022 @ 14h

online: <https://meet186.webex.com/meet186/j.php?MTID=md9d14a5f6a1d741ef7c0a4645200b8ad>

on site: Amphi L, ENS-lyon

Metals are bioessential elements and then have the potential to track early metabolisms in the rock record. Through a fine coupling of the study of the distribution and speciation of metals by SR-X-ray fluorescence and SR-XAS with the study of the metal-bearing phases (organic and mineral) by Raman and FTIR spectroscopies, it was possible to unravel the presence of As-metabolizing organisms in the Archean stromatolites of Tumbiana and the presence of oxygenic phototrophic organisms in the two late Mesoproterozoic fossil assemblages. These two case study therefore show the potential of this type of approach to provide new fundamental information on the metabolisms of organisms living in the Precambrian.