



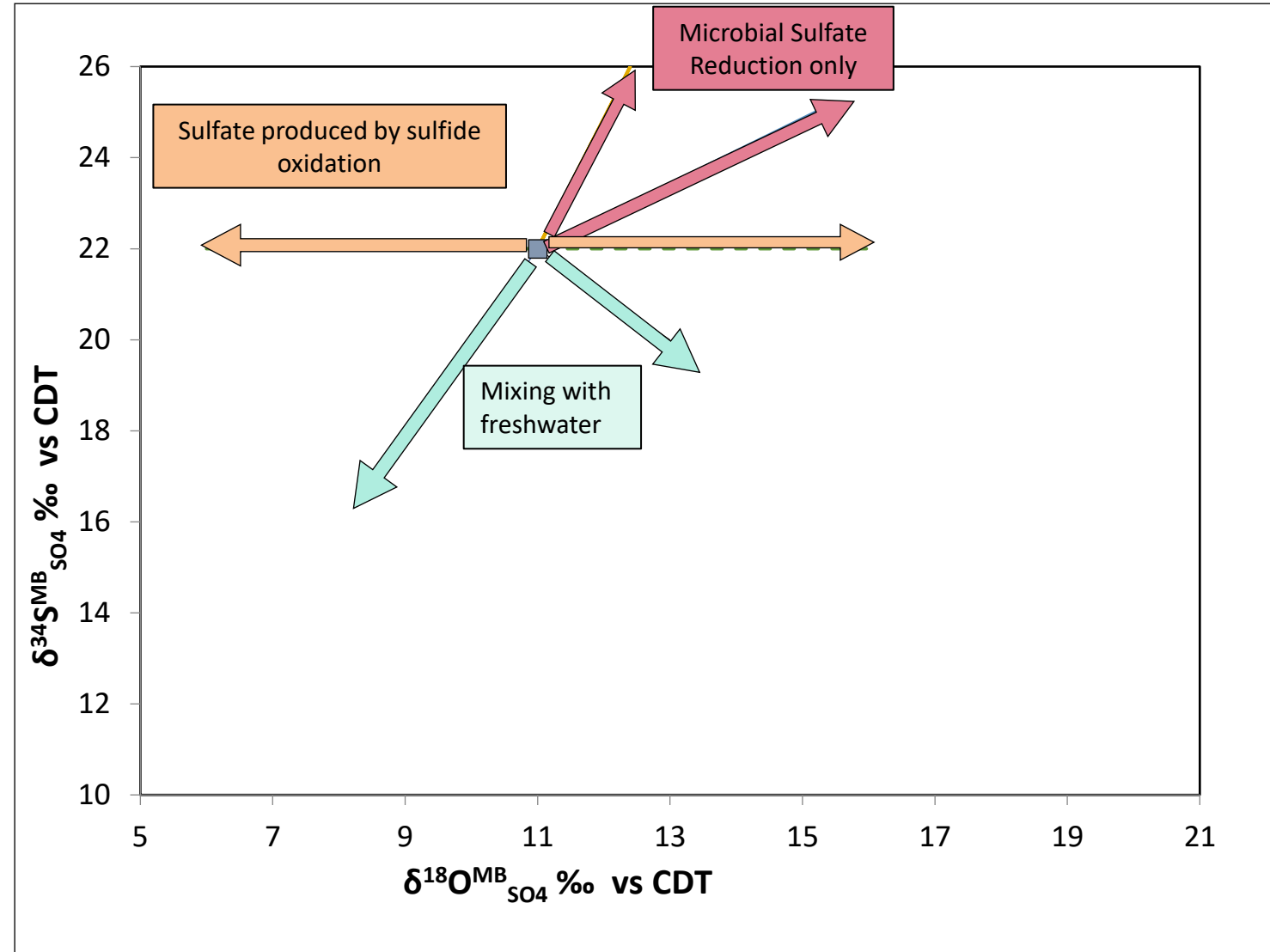
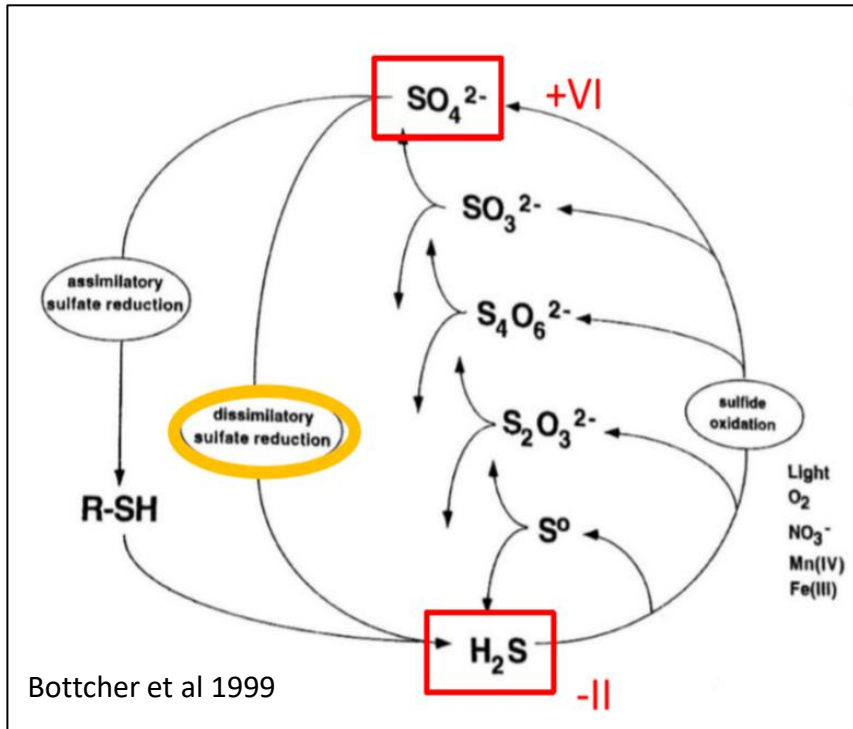
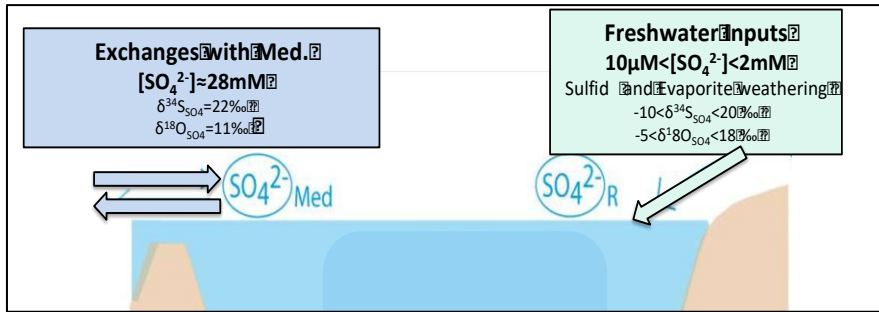
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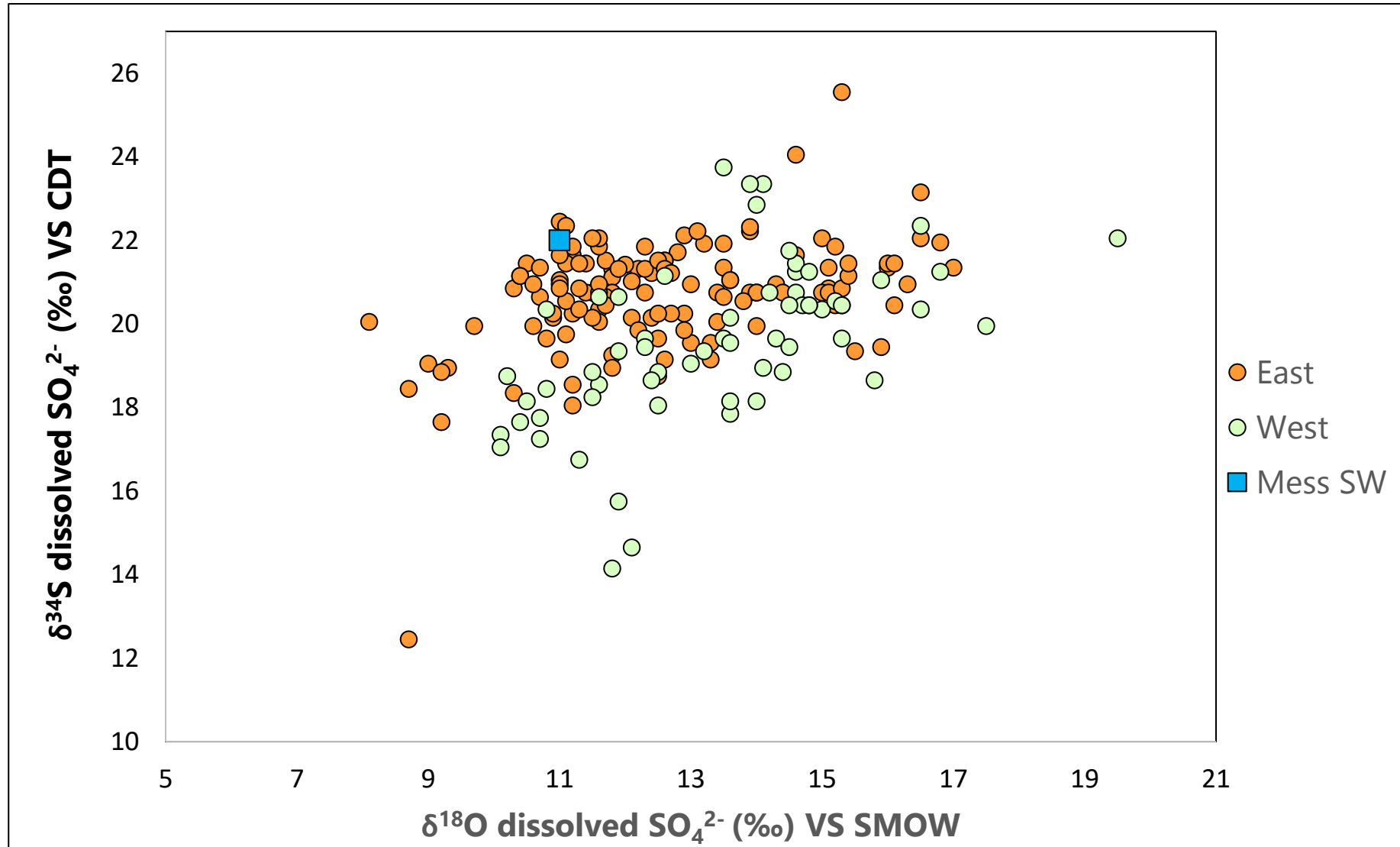
The biogeochemical sulfur cycle during the formation of the Mediterranean Salt Giant

Laetitia Guibourdenche, Pierre Cartigny, Francesco Dela Pierre,
Marcello Natalicchio, Antonio Caruso, and Giovanni Aloisi

Oxygen and sulfur isotopes of sulfate (SO_4^{2-}) are sensitive to mixing and microbial processes

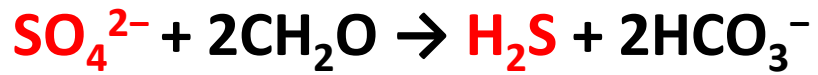


UPPER GYPSUM RECORD :
data available from Onshore and Offshore record

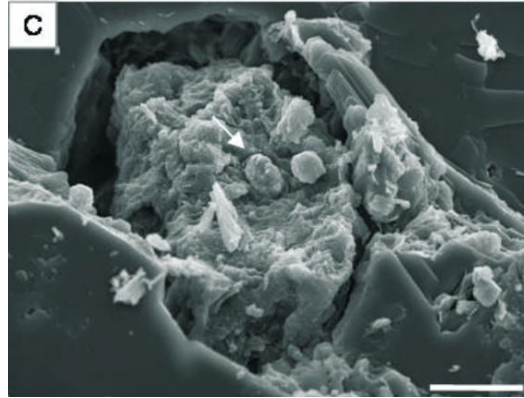
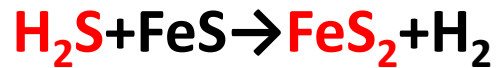


Important informations are also hidden in sulfide-bearing minerals...

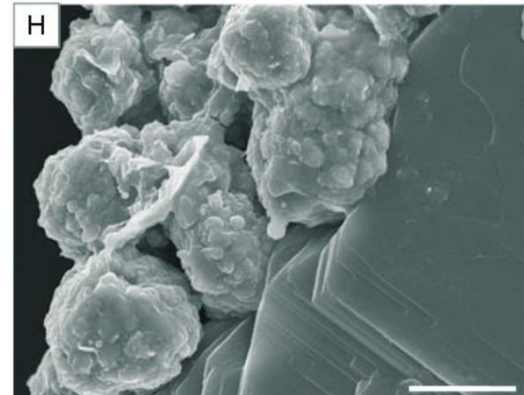
Microbial Sulfate Reduction :



Pyrite Formation :



Pyrite grains associated with filamentous microbe fossils



Pyrite grains associated with carbonate rich patina between gypsum laminae

SEM micrographs of selenite laminae from Vena del Gesso. Panieri et al (2008)

Pyrite (FeS₂) analyses

Combining both Sulfide and Sulfate bearing minerals :
Insights from the Vena del Gesso Section

$$\epsilon^{34}\text{S}_{\text{net}} \approx \delta^{34}\text{S}_{\text{pyrite}} - \delta^{34}\text{S}_{\text{gypsum}}$$



Modified from Lofi et al 2018

