

Historical mining sites in SW Sardinia (Italy): biomineral processes, environmental resilience and implications for risk analysis

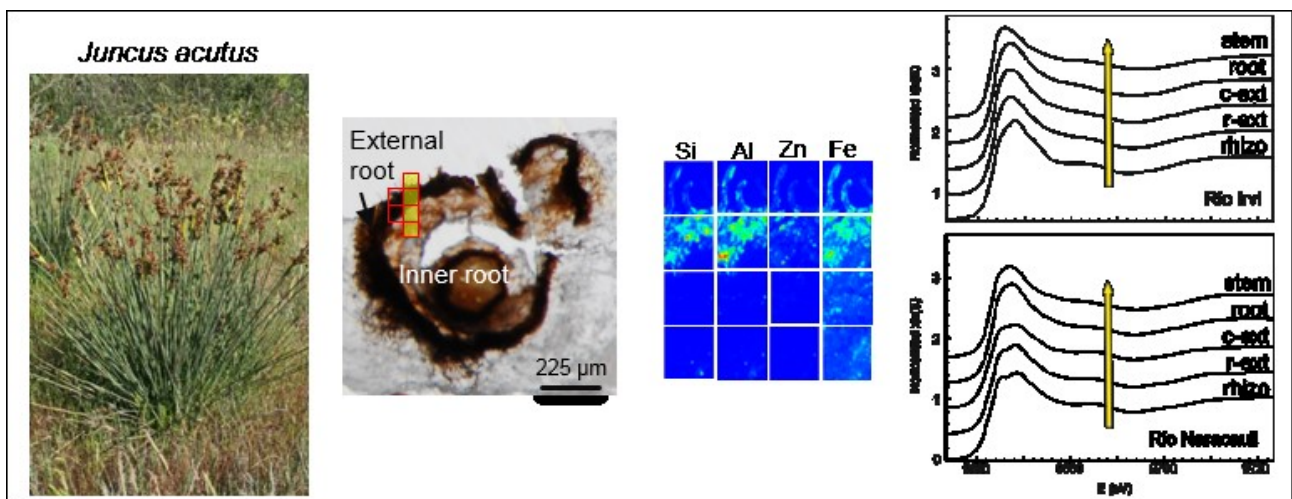
Tuesday, 18 May 2021 – 16:30

Webinar “Live” on-line at Zoom link:

<https://unipd.zoom.us/j/82978693795?pwd=TmlBSDBVRFVNL3NwTUUpGSW8rWFdpQT09>

Speaker: **Prof. Giovanni De Giudici**

Dipartimento di Scienze Chimiche e Geologiche - Università di Cagliari (Italy)



Mine polluted areas account for ca. 0.1 per cent of the total land surface. Mine wastes are transported by rivers to the oceans resulting also there in chemical pollution. Mine pollution, thus, must be considered a global environmental problem. However, we still have poor knowledge on the global impact of chemical pollution and the response of our ecosystem to mine pollution perturbation.

Minerals, microbes, plants, water and air are all compartments of the ecosystem. Environmental resilience can be promoted by one of these compartments and is generally sustained by the interaction among many of them. Moreover, state of the art knowledge on the effect of mineral reactions at larger scale allows to recognize environmental drivers. This knowledge also can make a difference in resource and environmental management.

This seminar will illustrate a case study in SW Sardinia (Italy) revealing a dynamic response of the environment to pollution, and its implications for risk analysis. Authigenic metal sulphides occur due to sulphate reducing bacteria under favourable conditions in the riverbed. When erosional processes do not prevail and thick muddy sediments lay in the hyporheic zone, biomineral processes occur also in plant systems and are thus part of the resilient response of the environment to mine pollution.

Proposer: **Prof. Maria Chiara Dalconi**

<https://www.geoscienze.unipd.it/seminari-iniziativa-convegni>