



### 1. Title

Mobilization of Essential Micronutrients by Exudates

### 2. Type

Commission Symposium: Comm. 3.3-Soil Fertility and Plant Nutrition

### 3. Organizer(s) & Convener

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### 4. Rationale

Organic molecules released from plants, fungi, and bacteria may interact strongly with metals and mineral surfaces. These molecules, including low-molecular mass organic acids, surfactants, and siderophores, partially regulate the solubilization and uptake of metal micronutrients, and thus are integral to plant health. An improved understanding of exudates-metal interactions in soils is thus critical for food security and crop production.

### 5. Objectives

The main objective is to bring together investigators studying all aspects of metal-exudate interactions, including absorption, dissolution, complexation, uptake, and transport of metals.

### 6. Description

This symposium will explore the interactions of siderophores, low-molecular mass organic acids, and surfactants with minerals and trace metals in soils. We welcome studies that explore these phenomena from the molecular to field scales. In addition, we welcome contributions that specifically probe the mechanisms of metal uptake by plants and soil microbes. Emphases will be placed on the developing a holistic understanding of metal dynamics in the rhizosphere, and on exudates-promoted uptake by plants and rhizosphere microbes.

