

## **Applications of NMR Spectroscopy to Clays and Clay Mineral Systems**

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This thematic session will demonstrate the wide range of applications of NMR spectroscopy as a powerful tool for advancing understanding of the structure, reactivity, and properties of clay minerals and related materials, which are important in their application. Topics include mineralogical identification, crystal chemistry, local order, surface chemistry and reactivity, as well as clay-organic interactions. Investigations of mineral structural components, such as through solid state  $^{27}\text{Al}$  NMR and  $^{29}\text{Si}$  NMR, of interlayer components and surface adsorbates, and of surface reactivity of small aqueous cluster analogues will be welcomed. Applied fields range from geosystems (Earth and Mars mineralogy, mineral deposits, etc.) to materials (layered double hydroxides, etc.), and water treatment (e.g., phosphorus and fluoride removal).