

Soil Chemistry Needs and Expectations at National Laboratory Facilities. (S02-jardine073322-Oral)

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Abstract:

National Laboratories within the United States are research institutions that are designed to resolve large-scale, multidisciplinary scientific issues of global significance. These facilities have a combination of characteristics that are consistent with both industry and academia, and have basic research missions that are tightly woven with applied problems. Environmental and Energy related disciplines within the National Laboratories have the greatest need for individuals with an expertise in soil chemistry. Such individuals must not only have a solid knowledge-base on fundamental soil chemical processes, they must also have a multidisciplinary understanding of soil processes in general. A keen understanding of coupled hydrological and microbiological processes and their influence on aqueous and solid phase geochemical reactions is essential for resolving research complexities associated with heterogeneous soil systems. Likewise, a comprehensive understanding of soil mineralogy and its impact on soil reaction chemistry is deemed as a desirable aspect of an individuals expertise. Curriculum issues in the development of a well-rounded and marketable soil chemist are discussed.

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