

Tuesday, June 17, 2014
LRS APPLICATIONS IN THE FIELD OF BIOMINERALIZATION AND
ENVIRONMENTAL MINERALOGY
10:30 a.m. Umrath Lounge

Chairs: Jill Pasteris
Mary Tecklenburg

- 10:30 a.m. Hutchinson I. B. * Edwards H. G. M. Ingley R. Harris L. McHugh M. Malherbe C. Jehlicka J. Marshall C. Parnell J.
[Preparations for the Launch of the EXOMARS Raman Laser Spectrometer — A Review of Recent Studies Which Highlight the Astrobiological and Geological Capabilities of Portable Raman Instrumentation](#) [#5093]
 A review of experiments performed on natural and analogue samples with prototype/portable instrumentation in preparation for the launch of the Raman Laser Spectrometer instrument on the ExoMars rover.
- 10:45 a.m. Tecklenburg M. M. J. * Urbanawiz S. A. Derry A. W. Ling M. L. Zhou D. Pavan B.
[Apatite Biomineralization: Model Studies of Composition and Kinetics](#) [#5085]
 Biomineralization of bone and teeth is modeled via studies of apatite crystallization to assess the effects of constituent ions and centrifugal force on kinetics of the amorphous to crystalline phase transition.
- 11:00 a.m. Li Z. Pasteris J. D.
[Raman Studies of Hypermineralized Dolphin's Bullae](#) [#5025]
 The dolphin's ear bone (bulla) is remarkable due to its extreme density (~2.5 g/cm³ in adults) and mineral content (~85 wt% in adults), which make it one of the most hypermineralized bone materials recognized.
- 11:15 a.m. Marshall C. P. * Olcott Marshall A.
[Examining Enameloid Chemistry in Lower Vertebrates to Determine Conodont Taxonomic Affinity](#) [#5090]
 Despite over 157 years of study, the phylogenetic position of conodonts remains controversial. The aim of this research is to determine the phylogenetic position of conodonts through elucidating inorganic tooth chemistry.
- 11:30 a.m. Bost N. * Ammar M. R. Genevois C. Poirier J.
[Study of Carbon Deposition and Transformation Under Reducing Condition — Implication for Green-House Gas Reduction](#) [#5078]
 This study report on the study of the carbon transformation depending of the temperature and the reducing degree (gaz composition: CO, H₂ and CO + H₂) using different catalyts.
- 11:45 a.m. *Audience Discussion of a Question Posed by the Chairs*
- 12:00 p.m. LUNCH
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