

Monday, April 24, 2017
EXOPLANETS: BIOSIGNATURES:
PIGMENTS AND OTHER BIOLOGICAL SURFACE FEATURES
AS EXOPLANET BIOSIGNATURES
10:15 a.m. Arizona Ballroom D

Chairs: Siddharth Hegde
Shiladitya DasSarma

- 10:15 a.m. DasSarma S. * DasSarma P. Laye V. J. Basting P. Slonczewski J.
[Diversity of Archaeal Photopigments and Implications for Biosignatures](#) [#3199]
Haloarchaea are evolutionary relics and their novel photopigments provide new biosignatures for astrobiology.
- 10:30 a.m. Parenteau M. N. * Sparks W. B. Blankenship R. E. Germer T. A. Telesco C. M. Kiang N. Y.
Pallé E. Kolokolova L. Robb F. T. Meadows V. S.
[Global Surface Photosynthetic Biosignatures of Anoxic Biospheres](#) [#3668]
We aim to characterize the “rules” that dictate the spectral features of anoxygenic phototrophs so they can be predicted and modeled for exoplanets.
- 10:45 a.m. O’Malley-James J. T. * Kaltenegger L.
[The Habitability of Highly UV-Irradiated Surface Environments: Alternative and Temporal Biosignatures](#) [#3314]
We propose biofluorescence as a UV-defense strategy for highly UV-irradiated planets. We model its detectability and find that it is a plausible biosignature.
- 11:00 a.m. Hegde S. * Kaltenegger L. Rothschild L.
[Spectral Fingerprints of a Habitable Planet](#) [#3652]
We explore the spectroscopic signatures of Earth-like planets by modeling the observable spectra for a diverse range of biological surface features.