

Thursday, March 22, 2018 [R623]  
**POSTER SESSION II: INSTRUMENT AND PAYLOAD CONCEPTS IV: ASTROBIOLOGY**  
**6:00 p.m. Town Center Exhibit Area**

Walroth R. C. Blake D. F. Sarrazin P. Thompson K. Meursing S. A. **POSTER LOCATION #371**  
[MAPX-PIXE: A Full Field Micro X-Ray Fluorescence Imager for Astrobiology Applications on Ocean Worlds](#) [#2233]

MapX-PIXE is a XRF imager using radioisotopes for improved detection of light elements including C, N. Progress to date on development will be presented.

Sandford M. Misra A. K. Acosta-Maeda T. E. Porter J. Egan M. et al. **POSTER LOCATION #372**  
[Detection of "Search for Life" Elements Using Compact Remote Raman System from 122 Meters](#) [#1695]

We report remote Raman detection of water, ice, hydrous minerals, amino acids, organics, etc. from 122 meters in daylight using a compact remote Raman system.

Misra A. K. Acosta-Maeda T. E. Sandford M. Gasda P. J. Porter J. et al. **POSTER LOCATION #373**  
[Fast, Non-Contact Detection of Biomaterials During Daylight with "Standoff Biofinder"](#) [#1710]

"Standoff biofinder" detects all biological materials including microbes on lava rocks during daylight in a 2800 cm<sup>2</sup> area from 3 m distance with 1 s detection.

Acosta-Maeda T. E. Misra A. K. Sandford M. Sharma S. K. Garmire D. et al. **POSTER LOCATION #374**  
[Detection of Biosignatures in Million Years Old Fossils with the "Standoff Biofinder"](#) [#2777]

We positively detected up to 2.2 Ga fossils as biosignatures using the "Standoff Biofinder" to obtain short lived fluorescence images.

Viola D. Byrne S. Drouet d'Aubigny C. Williams B. Rizk B. **POSTER LOCATION #375**  
[Detecting Chiral Biosignatures on Europa with the C-LIFE Polarized Microscope](#) [#2545]

The Cold Lightweight Imagers for Europa (C-LIFE) includes a polarimetric microscopic imager that we use to test laboratory samples for chiral biosignatures.

Ryan C. H. Daly M. G. Brady A. L. Slater G. F. Lim D. S. S. **POSTER LOCATION #376**  
[The Use of 266nm Laser-Induced Fluorescence Spectroscopy for Detection of Organic Biosignatures in Martian Analogue Volcanic Rocks](#) [#2614]

Fluorescence spectra / Show where, in "martian" lava / Those critters once lived.

Gasda P. J. Wiens R. C. Nelson T. Love S. P. Quinn H. et al. **POSTER LOCATION #377**  
[OrganiCam: A Time-Resolved Laser Fluorescence Imager and Spectrometer for Bio-Organic Detection on Ocean Worlds](#) [#2146]

OrganiCam is a bio-organic material imager and spectrometer concept suitable for landed missions exploring icy worlds, including Europa, Enceladus, and Ceres.

Smith H. D. Duncan A. G. Lloyd C. R. Merrill L. D. Neary P. L. et al. **POSTER LOCATION #378**  
[The ASK \(Astrobiology Search Kit\) Instrument](#) [#2508]

In this presentation we describe the ASK (Astrobiology Search Kit) instrument and present preliminary results on the instrument biomarker capability.

Buch A. Morisson M. Szopa C. He Y. Millan M. et al.

**POSTER LOCATION #379**

[Optimization of the TMAH Thermochemolysis Technique for the Detection of Trace Organic Matter on Mars by the SAM and MOMA-Pyr-GC-MS Experiment](#) [#1422]

Both SAM and MOMA experiments are equipped with Pyr-GC-MS. We optimized pyrolysis and TMAH-thermochemolysis of a martian regolith simulant.

Brinckerhoff W. B. Pinnick V. T. Grubisic A. Kaplan D.

Danell R. M. et al.

**POSTER LOCATION #380**

[Flight Integration and Test of the Mars Organic Molecule Analyzer \(MOMA\)](#) [#2914]

We present recent development status and scientific testing results for the Mars Organic Molecule Analyzer (MOMA) investigation on the ExoMars rover mission.