

MORGAN L. CABLE, PH.D.

Research Scientist, Astrobiology and Ocean Worlds Group Supervisor, Planetary Science Section
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LEADERSHIP

- Outer Planets Assessment Group (OPAG) Steering Committee Member • 2018+
- Roadmap for Ocean Worlds (ROW) Target Team Lead for Enceladus • 2016-2018
- Caltech Summer Undergraduate Research Fellowship (SURF) Board Member • 2014+
- Managing Director • Space Camp • SongAm Challenger Learning Center, Korea • 2009+
- Iceland field expeditions • Co-Lead • 2012+

RECENT AWARDS

- Selected as one of the 'Talented 12' by the American Chemical Society (ACS) • 2018
- Voyager Award for exceptional work on outer worlds projects, chemistry and tech • 2018
- Bruce Murray Award for Excellence in Education and Public Engagement • 2018
- Team Award for analysis and refinement of Europa Lander science objectives • 2018
- Team Award for excellence in developing the Europa Lander SDT report • 2017
- Charles Elachi Award for Outstanding Early Career Achievement • 2016

CERTIFICATIONS

- CPR and First Aid • Adult/Pediatric • 2018
- Private Pilot • Single Engine Land • 2009
- SCUBA • Open Water Diver • PADI • 2002

PATENTS, ETC.

- Wet chemistry sample handling for micro-gravity • NTR-50102 • Accepted 2016
- PLUme Sampler for icy worlds (PLUS) • NTR-50079 • Accepted 2015
- The Chemical Laptop • Provisional Patent Application 62/134,946 • Filed 2015
- μ NACE method to analyze long-chain primary amines • NTR-48615 • Accepted 2012

EDUCATION

Ph.D., Inorganic Chemistry • California Institute of Technology • 2010
B.A., Chemistry (*Summa cum laude*) • Honors College of Florida Atlantic University • 2005

EXPERIENCE

Task Manager for Strategic R&TD (\$1.2M/yr) to retire risk for hyper-velocity sampling at Enceladus, Titan and Venus • 2018+

Co-Investigator for Dragonfly Mission Concept, one of two finalists for the New Frontiers 4 mission call • 2017+

Project Staff Scientist for Europa Lander Project • Responsible for science ops, devel of science reqs, wrote/edited SDT report • 2016+

Deputy Phase Lead for Landing Site Selection for Europa Lander Project • Responsible for landing site selection/certification • 2016+

Payload Systems Engineer for Europa Lander Project • Responsible for CC and calibration plan, generation of cost models • 2016-2018

Research Scientist in Cryogenic Chemistry Laboratory • Performing experimental work (Raman, IR) to understand physical processes and surface chemistry of Titan's lakes, evaporite basins, dunes • 2015+

Collaborator on Mapping Imaging Spectrometer for Europa (MISE) • Supporting calibration activities, devel of docs and reqs • 2015+

Assistant Project Science Systems Engineer for Cassini Mission • Supported PS on science oversight, trades, issues • 2015-2017

RECENT RELEVANT PUBLICATIONS (OF 29)

- **M L Cable**, T H Vu, H Maynard-Casely et al. (2018) The acetylene-ammonia co-crystal on Titan. *Earth Space Chem.*, 2 (4), 366-375.
- H Maynard-Casely, **M L Cable**, M J Malaska et al. (2018) Prospects for mineralogy on Titan. *American Mineralogist*. 103 (3), 343-349.
- D M Gentry, E S Amador, **M L Cable** et al. (2017) Correlations Between Life-Detection Techniques and Implications for Sampling Site Selection in Planetary Analog Missions. *Astrobiology*, 17 (10), 1009-1021.
- C M Lee, **M L Cable**, S J Hook, et al. (2015) An introduction to the NASA Hyperspectral InfraRed Imager (HyspIRI) mission and preparatory activities. *Remote Sens. Environ.*, 167, 6-19.
- **M L Cable**, T H Vu, R Hodyss et al. (2014) Experimental determination of the kinetics of formation of the benzene-ethane co-crystal and implications for Titan. *GRL*, 41 (5), 5396-5401.
- **M L Cable**, A M Stockton, M F Mora et al. (2014) Microchip non-aqueous capillary electrophoresis of saturated fatty acids using a novel fluorescent dye. *Anal. Methods*, 6, 9532-9535.



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