

SPACE CHEMISTRY SYMPOSIUM

254th ACS NATIONAL MEETING & EXPOSITION,
AUGUST 20th, 2017, WASHINGTON, D.C., USA
LIBERTY BALLROOM SALON M - MARRIOTT MARQUIS WASHINGTON, DC

DIVISION: YOUNGER CHEMISTS COMMITTEE
SESSION: SPACE CHEMISTRY: HOW IT HELPS SPACE EXPLORATION



The Flow Chemistry Society is proud to announce the 2nd Space Chemistry Symposium

Space Chemistry:

How it Helps Space Exploration

Do not miss your chance to listen to 6 lectures performed by reputable, internationally renowned scientists. The topics will cover a wide range of pioneering chemistry technologies from space perspectives, including flow chemistry, photoelectrochemistry, and more novel trends in chemistry. These innovations are also facilitating Mars exploration, including human expeditions, which align with the main objectives of the topics covered by the upcoming Journey to Mars symposium, which is to be held on August 22nd at the ACS Fall Meeting.

On 20th August, 2017
As part of the
254th ACS
National Meeting
& Exposition
Washington, D.C.,
USA

This symposium is the continuation of the remarkably successful 1st Symposium which was held on April 3rd at the 253rd American Chemical Society meeting in San Francisco with 13 speakers, including a former NASA astronaut. The project was referred to as the key to supplying materials and medicines during extraterrestrial journeys by the C&EN (E. K. Wilson, Chemistry's role in human space travel, C&EN, 2017 - Vol. 95 Issue 18, pp. 20-21).

Additionally the first space chemistry paper was published in Nature Reviews Chemistry (R. Jones, F. Darvas, Cs. Janáky, New space for chemical discoveries, Nature Reviews Chemistry, Volume 1, Article number 0055, pp. 1-3., doi: 10.1038/s41570-017-0055), describing potential opportunities related to space chemistry. With an innovative extension of this topic, flow chemistry systems can be used for on-demand drug synthesis, including a plug and play "drug on demand" chemistry system, where pharmaceuticals and other molecules are synthesized, analysed, purified and formulated when needed, significantly facilitating future long-distance human space missions.

Organizers/

Presiders:

Ferenc Darvas

Roland Hirsch

Attila Pavlath

ACS Fall National Meeting presentations AUGUST 20th, 2017

Session: Space Chemistry: How It Helps Space Exploration

Location: Liberty Ballroom Salon M - Marriott Marquis Washington, DC

Timetable	Speaker	Affiliation	Title of Talk
8:30 - 8:35	Ferenc Darvas	Flow Chemistry Society Chairman	Introduction
8:35 - 9:05	Luke B. Roberson	NASA, Kennedy Space Center	Space chemistry at NASA's Kennedy Space Center
9:05 - 9:35	Shimon Amselem	SpacePharma	Remote controlled miniaturized chemistry and biology lab platform for space research
9:35 - 10:05	Attila Pavlath	USDA, ACS past President	Introduction to Mars research
10:05 - 10:10	Coffee break		
10:10 - 10:40	András Guttman	University of Debrecen	Astronautical capillary electrophoresis analysis of serum immunoglobulin N-glycans
10:40 - 11:10	Richard Jones	ThalesNano Inc, FCS	Design of flow reactors for supporting traveling to Mars
11:10 - 11:40	Csaba Janáky	University of Szeged	Sunlight-driven transformation of CO ₂ to useful products on Mars: Electrochemical vs. photoelectrochemical scenario