



Journal of the Indian Institute of Science

A Multidisciplinary Reviews Journal



Astrobiology and Astrochemistry



Journal of the Indian Institute of Science

A Multidisciplinary Reviews Journal

Volume 103 · Issue 3 · July 2023

EDITORIAL DESK

Editor's Desk

G.K. Ananthasuresh 671

GUEST EDITORIAL

Special Issue on Astrochemistry and Astrobiology

E. Arunan · M.S. Gudipati · K. Venkateswaran 675

STARTER

Starter Article

K. Venkateswaran 677

REVIEW ARTICLE

Planetary Protection Policy and Technology Needs to Enable Future Robotic and Crewed Missions

J.N. Benardini · E. Seasly 683

MICROBIAL LIFE IN EXTREME ENVIRONMENT

Perspectives on Sampling and New Generation Sequencing Methods for Low-Biomass Bioaerosols in Atmospheric Environments

J. Hou · S. Fujiyoshi · I.U. Perera · Y. Nishiuchi · M. Nakajima · D. Ogura · K. Yarimizu · F. Maruyama 687

Yeasts in the Era of Astrobiological Research

P. Leo · S. Onofri 699

Exploring the Potential of Bacteriophages on Earth and Beyond

A. Mohanty · B. Shaw · N. Pradeep · N.K. Singh · K. Venkateswaran 711

Life on the Edge: Bioprospecting Extremophiles for Astrobiology

J. Schultz · A. dos Santos · N. Patel · A.S. Rosado 721

(Contents continued on inside back cover)

Coverpage Description: An image of our Universe, highlighting Earth as a testament to the incredible journey of life's molecules formed and evolved. Astrochemistry and Astrobiology delve into the understanding of this evolution, tracing the origins and development of molecules and life since the Big Bang

Further articles can be found at www.springerlink.com

Indexed/abstracted in Science Citation Index Expanded (SciSearch), SCOPUS, Google Scholar, EBSCO Discovery Service, OCLC, Summon by ProQuest, Zoological Record

Instructions for Authors for *J Indian Inst. of Science* are available at www.springer.com/41745