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# Encyclopedia of Astrobiology

*Second Edition*



Springer Reference

# Encyclopedia Of Astrobiology

**Muriel Gargaud, William M.  
Irvine, Ricardo Amils, José Cernicharo  
Quintanilla, Henderson James  
Cleaves, Daniele Pinti, Daniel  
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## **Encyclopedia Of Astrobiology:**

**Encyclopedia of Astrobiology** Muriel Gargaud,Ricardo Amils,2011-05-26 Astrobiology is a remarkably interdisciplinary field This reference serves as a key to understanding technical terms from the different subfields of astrobiology including astronomy biology chemistry the geosciences and the space sciences [Encyclopedia of Astrobiology](#) ,2011

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[The Encyclopedia of Astrobiology, Astronomy, and Spaceflight](#), 1999 The Encyclopedia is an on line A Z maintained by astronomer author David Darling The goal is to provide a comprehensive source of information covering contemporary astronomy astrobiology and astrophysics SETI space missions advanced propulsion concepts historical aspects and biographies past and present It is intended to be of use to the interested layperson student and academic alike

[The Extraterrestrial Encyclopedia](#) David J. Darling, 2000 In the most complete reference book ever published for all those curious about life beyond Earth Darling examines the latest scientific developments and the history of ideas about other worlds and alternative life forms dating back to ancient Greece 100 illustrations

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possibly damage any extant life on it By inadvertently carrying exotic organisms back to Earth on our spacecraft we also risk the release of biohazardous materials into our own ecosystem Such concerns were recognized by scientists even before the 1957 launch of Sputnik This book presents the history of planetary protection by tracing the responses to the above concerns on NASA s missions to the Moon Mars Venus Jupiter Saturn and many smaller bodies of our solar system The book relates the extensive efforts put forth by NASA to plan operations and prepare space vehicles that return exemplary science without contaminating the biospheres of other worlds or our own To protect irreplaceable environments NASA has committed to conducting space exploration in a manner that is protective of the bodies visited as well as of our own planet

**Origin of Life via Archaea** Richard Gordon, 2024-10-01 This book surveys the models for the origin of life and presents a new model starting with shaped droplets and ending with life as polygonal Archaea it collects the most published micrographs of Archaea discovered only in 1977 which support this conclusion and thus provides the first visual survey of Archaea Origin of Life via Archaea s purpose is to add a new hypothesis on what are called shaped droplets as the starting point for flat polygonal Archaea supporting the Vesicles First hypothesis The book contains over 6000 distinct references and micrographs of 440 extant species of Archaea 41% of which exhibit polygonal phenotypes It surveys the intellectual battleground of the many ideas of the origin of life on earth chemical equilibrium autocatalysis and biotic polymers This book contains 17 chapters some coauthored on a wide range of topics on the origin of life including Archaea s origin patterns and species It shows how various aspects of the origin of life may have occurred at chemical equilibrium not requiring an energy source contrary to the general assumption For the reader s value its compendium of Archaea micrographs might also serve many other interesting questions about Archaea One chapter presents a theory for the shape of flat polygonal Archaea in terms of the energetics at the surface edges and corners of the S layer Another shows how membrane peptides may have originated The book also includes a large table of most extant Archaea that is searchable in the electronic version It ends with a chapter on problems needing further research Audience This book will be used by astrobiologists origin of life biologists physicists of small systems geologists biochemists theoretical and vesicle chemists

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