

# NS2102: Astrobiology and Astrophysics

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1.  
Gilmour, Iain, Sephton, Mark A., Conway, Andrew, Open University. An Introduction to Astrobiology. Cambridge University Press/Open University Press; 2004.
  
2.  
Plaxco, Kevin W., Gross, Michael. Astrobiology: A Brief Introduction. 2nd ed. Johns Hopkins University Press; 2011.
  
3.  
Grotzinger, John P., Jordan, Thomas H. Understanding Earth. 6th ed. W. H. Freeman; 2010.
  
4.  
Tipler, Paul A., Mosca, Gene P. Physics for Scientists and Engineers: With Modern Physics. 6th ed. W.H. Freeman; 2008.  
<https://bibliu.com/app/#/view/books/9781319155988/pdf2html/index.html>
  
5.  
Reece, Jane B., Campbell, Neil A. Biology. 9th ed. Pearson Education; 2011.  
[http://le.alma.exlibrisgroup.com/view/action/uresolver.do?operation=resolveService&package\\_service\\_id=5663610340002746&institutionId=2746&customerId=2745](http://le.alma.exlibrisgroup.com/view/action/uresolver.do?operation=resolveService&package_service_id=5663610340002746&institutionId=2746&customerId=2745)
  
- 6.

Brooker, Robert J. *Biology*. 2nd ed. McGraw-Hill Higher Education; 2010.

7.

Raven, Peter H., Johnson, George B., Mason, Kenneth A., Losos, Jonathan B., Singer, Susan R. *Biology*. 10th ed. McGraw-Hill; 2014.

8.

Barton, Nicholas H. *Evolution*. Cold Spring Harbor Laboratory Press; 2007.

9.

Burrows, Andrew. *Chemistry3: Introducing Inorganic, Organic and Physical Chemistry*. Oxford University Press; 2009.

<https://bibliu.com/app/#/view/books/9780192529893/epub/OEBPS/contents.html>

10.

Brown, Theodore L. *Chemistry: The Central Science*. 12th ed. Prentice Hall; 2012.

11.

Zumdahl, Steven S. *Chemical Principles*. 6th ed. Brooks/Cole; 2009.

[http://le.alma.exlibrisgroup.com/view/action/uresolver.do?operation=resolveService&package\\_service\\_id=5663963920002746&institutionId=2746&customerId=2745](http://le.alma.exlibrisgroup.com/view/action/uresolver.do?operation=resolveService&package_service_id=5663963920002746&institutionId=2746&customerId=2745)

12.

Averill, Bruce, Eldredge, Patricia. *Chemistry: Principles, Patterns, and Applications*. International ed. Pearson Benjamin Cummings; 2007.

13.

Housecroft, Catherine E., Constable, Edwin C. *Chemistry: An Introduction to Organic, Inorganic and Physical Chemistry*. 4th ed. Prentice Hall; 2010.

14.

Carroll, Bradley W., Ostlie, Dale A. An Introduction to Modern Astrophysics. 2nd International ed. Pearson Addison-Wesley; 2007.

15.

Freedman, Roger A., Geller, Robert M., Kaufmann, William J. Universe. 9th ed. W.H. Freeman; 2011.

16.

Charbonneau D, Brown TM, Latham DW, Mayor M. Detection of Planetary Transits Across a Sun-like Star. *The Astrophysical Journal*. 2000;529(1):L45-L48. doi:10.1086/312457

17.

Microbial growth at hyperaccelerations up to  $403,627 \times g$ . *10AD*;108(19).  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093466/?tool=pmcentrez&rendertype=abstract>

18.

Di Giulio M. Biological evidence against the panspermia theory. *Journal of Theoretical Biology*. 2010;266(4):569-572. doi:10.1016/j.jtbi.2010.07.017

19.

Gislason SR, Oelkers EH, Eirisdottir ES, et al. Direct evidence of the feedback between climate and weathering. *Earth and Planetary Science Letters*. 2009;277(1-2):213-222. doi:10.1016/j.epsl.2008.10.018

20.

Kasting J. Habitable Zones around Main Sequence Stars. *Icarus*. 1993;101(1):108-128. doi:10.1006/icar.1993.1010

21.

Kallenbach R, Benz W, Lugmair G. Introduction: Timescales for the Formation of Terrestrial Planets. In: Benz W, Kallenbach R, Lugmair GW, eds. From Dust to Terrestrial Planets. Vol Space sciences series of ISSI. Springer Science+Business Media, B.V.; 2012.

22.

Lineweaver CH. The Galactic Habitable Zone and the Age Distribution of Complex Life in the Milky Way. *Science*. 2004;303(5654):59-62. doi:10.1126/science.1092322

23.

Lissauer J. The Outer Planets and their Moons: Formation of the Outer Planets. In: The Outer Planets and Their Moons: Comparative Studies of the Outer Planets Prior to the Exploration of the Saturn System by Cassini-Huygens : Volume Resulting from an ISSI Workshop, 12-16 January 2004, Bern, Switzerland. Vol 19. Springer; 2005. <https://ebookcentral.proquest.com/lib/leicester/detail.action?docID=303249>

24.

Thommes EW, Matsumura S, Rasio FA. Gas Disks to Gas Giants: Simulating the Birth of Planetary Systems. *Science*. 2008;321(5890):814-817. doi:10.1126/science.1159723

25.

Carl Sagan. A search for life on Earth from the Galileo spacecraft. *Nature*. 1993;365(6448). [http://gl9sn3dh2u.search.serialssolutions.com/?ctx\\_ver=Z39.88-2004&ctx\\_enc=info%253Aofi%252Fenc%253AUTF-8&rft\\_id=info:sid/summon.serialssolutions.com&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=A+search+for+life+on+Earth+from+the+Galileo+spacecraft&rft.jtitle=Nature&rft.au=Carl+Sagan&rft.au=W+Reid+Thompson&rft.au=Robert+Carlson&rft.au=Donald+Gurnett&rft.date=1993-10-21&rft.pub=Nature+Publishing+Group&rft.issn=0028-0836&rft.eissn=1476-4687&rft.volume=365&rft.issue=6448&rft.spage=715&rft.externalDocID=1033560451&paramdict=en-US](http://gl9sn3dh2u.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%253Aofi%252Fenc%253AUTF-8&rft_id=info:sid/summon.serialssolutions.com&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=A+search+for+life+on+Earth+from+the+Galileo+spacecraft&rft.jtitle=Nature&rft.au=Carl+Sagan&rft.au=W+Reid+Thompson&rft.au=Robert+Carlson&rft.au=Donald+Gurnett&rft.date=1993-10-21&rft.pub=Nature+Publishing+Group&rft.issn=0028-0836&rft.eissn=1476-4687&rft.volume=365&rft.issue=6448&rft.spage=715&rft.externalDocID=1033560451&paramdict=en-US)

26.

Alonso Ricardo. ORIGIN OF LIFE ON EARTH. *Scientific American*. 2009;301(3). [http://gl9sn3dh2u.search.serialssolutions.com/?ctx\\_ver=Z39.88-2004&ctx\\_enc=info%253Aofi%252Fenc%253AUTF-8&rft\\_id=info:sid/summon.serialssolutions.com&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=ORIGIN+OF+LIFE+ON+EARTH&rft.jtitle=Scientific+American&rft.au=Alonso+Ricardo&rft.au=Jack+W+Szostak&rft.date=2009-09-01&rft.pub=Scientific+American%252C+Incorporated&rft.issn=0036-8733&rft.eissn=1946-7087&rft.volume=301&rft.issue=3&rft.spage=54&rft.externalDocID=1851532311&para](http://gl9sn3dh2u.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%253Aofi%252Fenc%253AUTF-8&rft_id=info:sid/summon.serialssolutions.com&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=ORIGIN+OF+LIFE+ON+EARTH&rft.jtitle=Scientific+American&rft.au=Alonso+Ricardo&rft.au=Jack+W+Szostak&rft.date=2009-09-01&rft.pub=Scientific+American%252C+Incorporated&rft.issn=0036-8733&rft.eissn=1946-7087&rft.volume=301&rft.issue=3&rft.spage=54&rft.externalDocID=1851532311&para)



Nelson, David L., Cox, Michael M., Lehninger, Albert L. Lehninger Principles of Biochemistry . 6th ed. W.H. Freeman; 2013.  
<https://bibliu.com/users/saml/samlLeicester?RelayState=eyJjdXN0b21fbGF1bmNoX3VybCl6liMvdmlldy9ib29rcy85NzgxMzE5MTUwODc3L2VwdWlVt0VCUFMveGh0bWwvbmVsXzk3ODE0NjQxODc5NTdfY29udC5odG1sIn0%3D>

34.

Murray, Robert K., Harper, Harold A. Harper's Illustrated Biochemistry. 28th ed. McGraw-Hill Medical; 2009.  
<https://ebookcentral.proquest.com/lib/leicester/detail.action?docID=4657718>

35.

Dartnell L. Knowledge : How to Rebuild Our World from Scratch. Vintage; 2014.

36.

Lissauer JJ, De Pater I. Fundamental Planetary Science: Physics, Chemistry and Habitability. Cambridge University Press; 2013.  
<http://site.ebrary.com/lib/leicester/docDetail.action?docID=10812136>

37.

Mattick JS. Opinion: RNA regulation: a new genetics? Nature Reviews Genetics. 2004;5(4):316-323. doi:10.1038/nrg1321

38.

Lundin R, Lammer H, Ribas I. Planetary Magnetic Fields and Solar Forcing: Implications for Atmospheric Evolution. Space Science Reviews. 2007;129(1-3):245-278.  
doi:10.1007/s11214-007-9176-4

39.

Mattick JS. Opinion: RNA regulation: a new genetics? Nature Reviews Genetics. 2004;5(4):316-323. doi:10.1038/nrg1321

40.

Brin GD. The Great Silence - the Controversy Concerning Extraterrestrial Intelligent Life,. 24:283-309. <http://adsabs.harvard.edu/full/1983QJRAS..24..283B>

41.

Hart MH. Explanation for the Absence of Extraterrestrials on Earth. 640:128-135. [http://articles.adsabs.harvard.edu/cgi-bin/nph-iarticle\\_query?1975QJRAS..16..128H&data\\_type=PDF\\_HIGH&whole\\_paper=YES&type=PRINTER&filetype=.pdf](http://articles.adsabs.harvard.edu/cgi-bin/nph-iarticle_query?1975QJRAS..16..128H&data_type=PDF_HIGH&whole_paper=YES&type=PRINTER&filetype=.pdf)

42.

Lada CJ. Stellar Multiplicity and the Initial Mass Function: Most Stars Are Single. The Astrophysical Journal. 2006;640(1):L63-L66. doi:10.1086/503158

43.

Boss AP. Giant Planet Formation by Gravitational Instability. Science. 1997;276(5320):1836-1839. doi:10.1126/science.276.5320.1836

44.

Inaba S, Wetherill GW, Ikoma M. Formation of gas giant planets: core accretion models with fragmentation and planetary envelope. Icarus. 2003;166(1):46-62. doi:10.1016/j.icarus.2003.08.001

45.

Mao S, Paczynski B. Gravitational microlensing by double stars and planetary systems. The Astrophysical Journal. 1991;374. doi:10.1086/186066

46.

Mayor M, Queloz D. A Jupiter-mass companion to a solar-type star. Nature. 1995;378(6555):355-359. doi:10.1038/378355a0

47.

Swain MR, Deroo P, Griffith CA, et al. A ground-based near-infrared emission spectrum of the exoplanet HD 189733b. *Nature*. 2010;463(7281):637-639. doi:10.1038/nature08775

48.

Guo J, Zhang F, Zhang X, Han Z. Habitable zones and UV habitable zones around host stars. *Astrophysics and Space Science*. 2010;325(1):25-30. doi:10.1007/s10509-009-0173-9

49.

Wesson PS. Cosmology, extraterrestrial intelligence, and a resolution of the Fermi-Hart par. 31:161-170. <http://adsabs.harvard.edu/abs/1990QJRAS..31..161W>

50.

Deguchi S, Shimoshige H, Tsudome M, et al. Microbial growth at hyperaccelerations up to 403,627 x g. *Proceedings of the National Academy of Sciences*. 2011;108(19):7997-8002. doi:10.1073/pnas.1018027108

51.

Sullivan, Woodruff Turner, Baross, John A. *Planets and Life: The Emerging Science of Astrobiology*. Cambridge University Press; 2007.

52.

Kauffman, Stuart A. *At Home in the Universe: The Search for Laws of Complexity*. Penguin; 1996.

53.

Kauffman, Stuart A. *The Origins of Order: Self-Organization and Selection in Evolution*. Oxford University Press; 1993.

54.

Lane, Nick. *Life Ascending: The Ten Great Inventions of Evolution*. Profile; 2009.

55.

Lunine, Jonathan Irving. *Astrobiology: A Multidisciplinary Approach*. Pearson Addison Wesley; 2005.

56.

Mattick JS. Small regulatory RNAs in mammals. *Human Molecular Genetics*. 2005;14(suppl\_1):R121-R132. doi:10.1093/hmg/ddi101

57.

Hüttenhofer A, Schattner P, Polacek N. Non-coding RNAs: hope or hype? *Trends in Genetics*. 2005;21(5):289-297. doi:10.1016/j.tig.2005.03.007

58.

Walker JCG, Hays PB, Kasting JF. A negative feedback mechanism for the long-term stabilization of Earth's surface temperature. *Journal of Geophysical Research*. 1981;86(C10). doi:10.1029/JC086iC10p09776

59.

Willenbring JK, von Blanckenburg F. Long-term stability of global erosion rates and weathering during late-Cenozoic cooling. *Nature*. 2010;465(7295):211-214. doi:10.1038/nature09044