NS2102: Astrobiology and Astrophysics

View Online

[1]

Gilmour, Iain, Sephton, Mark A., Conway, Andrew, and Open University, An introduction to astrobiology. Cambridge: Cambridge University Press/Open University Press, 2004.

[2]

Plaxco, Kevin W. and Gross, Michael, Astrobiology: a brief introduction, 2nd ed. Baltimore, Mass: Johns Hopkins University Press, 2011.

[3]

Grotzinger, John P. and Jordan, Thomas H., Understanding earth, 6th ed. New York: W. H. Freeman, 2010.

[4]

Tipler, Paul A. and Mosca, Gene P., Physics for scientists and engineers: with modern physics, 6th ed. New York, NY: W.H. Freeman, 2008. [Online]. Available: https://bibliu.com/app/#/view/books/9781319155988/pdf2htmlex/index.html

[5]

Reece, Jane B. and Campbell, Neil A., Biology, 9th ed. Boston: Pearson Education, 2011. [Online]. Available: 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. New York: McGraw-Hill Higher Education, 2010.

[7]

K. A. Mason, J. B. Losos, S. R. Singer, P. H. Raven, and G. B. Johnson, Biology, Eleventh edition. New York, NY: McGraw-Hill Education, 2017.

[8]

Barton, Nicholas H., Evolution. Cold Spring Harbor, N.Y.: Cold Spring Harbor Laboratory Press, 2007.

[9]

Burrows, Andrew, Chemistry3: introducing inorganic, organic and physical chemistry. Oxford: Oxford University Press, 2009. [Online]. Available: https://bibliu.com/app/#/view/books/9780192529893/epub/OEBPS/contents.html

[10]

Brown, Theodore L., Chemistry: the central science, 12th ed. Boston [Mass.]: Prentice Hall, 2012.

[11]

Zumdahl, Steven S., Chemical principles, 6th ed. Belmont, Calif: Brooks/Cole, 2009. [Online]. Available: http://le.alma.exlibrisgroup.com/view/action/uresolver.do?operation=resolveService&package_service_id=5663963920002746&institutionId=2746&customerId=2745

[12]

Averill, Bruce and Eldredge, Patricia, Chemistry: principles, patterns, and applications, International ed. San Francisco, Calif: Pearson Benjamin Cummings, 2007.

[13]

Housecroft, Catherine E. and Constable, Edwin C., Chemistry: an introduction to organic,

inorganic and physical chemistry, 4th ed. Harlow: Prentice Hall, 2010.

[14]

Carroll, Bradley W. and Ostlie, Dale A., An introduction to modern astrophysics, 2nd International ed. San Francisco: Pearson Addison-Wesley, 2007.

[15]

Freedman, Roger A., Geller, Robert M., and Kaufmann, William J., Universe, 9th ed. New York, NY: W.H. Freeman, 2011.

[16]

D. Charbonneau, T. M. Brown, D. W. Latham, and M. Mayor, 'Detection of Planetary Transits Across a Sun-like Star', The Astrophysical Journal, vol. 529, no. 1, pp. L45–L48, Jan. 2000, doi: 10.1086/312457.

[17]

'Microbial growth at hyperaccelerations up to 403,627 × g', vol. 108, no. 19, 10 AD, [Online]. Available: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093466/?tool=pmcentrez&rendertype=abstract

[18]

M. Di Giulio, 'Biological evidence against the panspermia theory', Journal of Theoretical Biology, vol. 266, no. 4, pp. 569–572, Oct. 2010, doi: 10.1016/j.jtbi.2010.07.017.

[19]

S. R. Gislason et al., 'Direct evidence of the feedback between climate and weathering', Earth and Planetary Science Letters, vol. 277, no. 1–2, pp. 213–222, Jan. 2009, doi: 10.1016/j.epsl.2008.10.018.

[20]

J. Kasting, ‘Habitable Zones around Main Sequence Stars’, Icarus, vol. 101, no. 1, pp. 108–128, Jan. 1993, doi: 10.1006/icar.1993.1010.

[21]

R. Kallenbach, W. Benz, and G. Lugmair, ‘Introduction: Timescales for the Formation of Terrestrial Planets’, in From dust to terrestrial planets, vol. Space sciences series of ISSI, W. Benz, R. Kallenbach, and G. W. Lugmair, Eds, Space Sciences Series of ISSI: Springer Science+Business Media, B.V., 2012.

[22]

C. H. Lineweaver, ‘The Galactic Habitable Zone and the Age Distribution of Complex Life in the Milky Way’, Science, vol. 303, no. 5654, pp. 59–62, Jan. 2004, doi: 10.1126/science.1092322.

[23]

J. Lissauer, ‘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, Space Sciences Series of ISSI: Springer, 2005. [Online]. Available: https://ebookcentral.proquest.com/lib/leicester/detail.action?docID=303249

[24]

E. W. Thommes, S. Matsumura, and F. A. Rasio, ‘Gas Disks to Gas Giants: Simulating the Birth of Planetary Systems’, Science, vol. 321, no. 5890, pp. 814–817, Aug. 2008, doi: 10.1126/science.1159723.

[25]

Carl Sagan, ‘A search for life on Earth from the Galileo spacecraft’, Nature, vol. 365, no. 6448, Oct. 1993, [Online]. Available: http://gl9sn3dh2u.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%253Aofi%252Fenc%253AUTF-8&rfr_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, vol. 301, no. 3, Sep. 2009, [Online]. Available: http://gl9sn3dh2u.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%253Aofi%252Fenc%253AUTF-8&rfr_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&paramdict=en-US

[27]

F. Canganella and J. Wiegel, 'Extremophiles: from abyssal to terrestrial ecosystems and possibly beyond', Naturwissenschaften, vol. 98, no. 4, pp. 253–279, Apr. 2011, doi: 10.1007/s00114-011-0775-2.

[28]

N. C. Wickramasinghe and J. T. Trevors, 'Non-terrestrial origin of life: a transformative research paradigm shift', Theory in Biosciences, vol. 132, no. 2, pp. 133–137, Jun. 2013, doi: 10.1007/s12064-012-0172-1.

[29]

J. L. Bada, 'New insights into prebiotic chemistry from Stanley Miller's spark discharge experiments', vol. 42, pp. 2186–2196, [Online]. Available: http://pubs.rsc.org/en/content/articlepdf/2013/cs/c3cs35433d

[30]

'The Evolution of Organelles'. [Online]. Available: http://www.sumanasinc.com/webcontent/animations/content/organelles.html

[31]

'Panspermia (wikipedia)'. [Online]. Available: https://en.wikipedia.org/wiki/Panspermia

[32]

Berg, Jeremy M., Tymoczko, John L., and Stryer, Lubert, Biochemistry, 7th ed. New York: W. H. Freeman, 2011. [Online]. Available: https://bibliu.com/users/saml/samlLeicester?RelayState=eyJjdXN0b21fbGF1bmNoX3VybCI6IiMvdmlldy9ib29rcy85NzgxMzE5MjQ4MDYyL2VwdWIvT0VCUFMveGh0bWwvYmVyXzk3ODEzMTkxMTQ2NzFfY29udGVudHMuaHRtbCJ9

[33]

Nelson, David L., Cox, Michael M., and Lehninger, Albert L., Lehninger principles of biochemistry, 6th ed. New York, N.Y.: W.H. Freeman, 2013. [Online]. Available: https://bibliu.com/users/saml/samlLeicester?RelayState=eyJjdXN0b21fbGF1bmNoX3VybCI6IiMvdmlldy9ib29rcy85NzgxMzE5MTUwODc3L2VwdWIvT0VCUFMveGh0bWwvbmVsXzk3ODE0NjQxODc5NTdfY29udC5odG1sIn0%3D

[34]

V. W. Rodwell and D. A. Bender, Harper's illustrated biochemistry, Thirty-First edition. New York: McGraw-Hill Education, 2018.

[35]

L. Dartnell, Knowledge : how to rebuild our world from scratch. London: Vintage, 2014.

[36]

J. J. Lissauer and I. De Pater, Fundamental planetary science: physics, chemistry and habitability. New York: Cambridge University Press, 2013. [Online]. Available: http://site.ebrary.com/lib/leicester/docDetail.action?docID=10812136

[37]

J. S. Mattick, 'Opinion: RNA regulation: a new genetics?', Nature Reviews Genetics, vol. 5, no. 4, pp. 316–323, Apr. 2004, doi: 10.1038/nrg1321.

[38]

R. Lundin, H. Lammer, and I. Ribas, 'Planetary Magnetic Fields and Solar Forcing: Implications for Atmospheric Evolution', Space Science Reviews, vol. 129, no. 1–3, pp.

245–278, Aug. 2007, doi: 10.1007/s11214-007-9176-4.

[39]

J. S. Mattick, ‘Opinion: RNA regulation: a new genetics?’, Nature Reviews Genetics, vol. 5, no. 4, pp. 316–323, Apr. 2004, doi: 10.1038/nrg1321.

[40]

G. D. Brin, ‘The Great Silence - the Controversy Concerning Extraterrestrial Intelligent Life’, vol. 24, pp. 283–309, [Online]. Available: http://adsabs.harvard.edu/full/1983QJRAS..24..283B

[41]

M. H. Hart, ‘Explanation for the Absence of Extraterrestrials on Earth.’, vol. 640, pp. 128–135, [Online]. Available: 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]

C. J. Lada, ‘Stellar Multiplicity and the Initial Mass Function: Most Stars Are Single’, The Astrophysical Journal, vol. 640, no. 1, pp. L63–L66, Mar. 2006, doi: 10.1086/503158.

[43]

A. P. Boss, ‘Giant Planet Formation by Gravitational Instability’, Science, vol. 276, no. 5320, pp. 1836–1839, Jun. 1997, doi: 10.1126/science.276.5320.1836.

[44]

S. Inaba, G. W. Wetherill, and M. Ikoma, ‘Formation of gas giant planets: core accretion models with fragmentation and planetary envelope’, Icarus, vol. 166, no. 1, pp. 46–62, Nov. 2003, doi: 10.1016/j.icarus.2003.08.001.

[45]

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

[46]

M. Mayor and D. Queloz, ‘A Jupiter-mass companion to a solar-type star’, Nature, vol. 378, no. 6555, pp. 355–359, Nov. 1995, doi: 10.1038/378355a0.

[47]

M. R. Swain et al., ‘A ground-based near-infrared emission spectrum of the exoplanet HD 189733b’, Nature, vol. 463, no. 7281, pp. 637–639, Feb. 2010, doi: 10.1038/nature08775.

[48]

J. Guo, F. Zhang, X. Zhang, and Z. Han, ‘Habitable zones and UV habitable zones around host stars’, Astrophysics and Space Science, vol. 325, no. 1, pp. 25–30, Jan. 2010, doi: 10.1007/s10509-009-0173-9.

[49]

P. S. Wesson, ‘Cosmology, extraterrestrial intelligence, and a resolution of the Fermi-Hart par’, vol. 31, pp. 161–170, [Online]. Available: http://adsabs.harvard.edu/abs/1990QJRAS..31..161W

[50]

S. Deguchi et al., ‘Microbial growth at hyperaccelerations up to 403,627 x g’, Proceedings of the National Academy of Sciences, vol. 108, no. 19, pp. 7997–8002, May 2011, doi: 10.1073/pnas.1018027108.

[51]

Sullivan, Woodruff Turner and Baross, John A., Planets and life: the emerging science of astrobiology. Cambridge: Cambridge University Press, 2007.

[52]

Kauffman, Stuart A., At home in the universe: the search for laws of complexity. London: Penguin, 1996.

[53]

Kauffman, Stuart A., The origins of order: self-organization and selection in evolution. New York: Oxford University Press, 1993.

[54]

Lane, Nick, Life ascending: the ten great inventions of evolution. London: Profile, 2009.

[55]

Lunine, Jonathan Irving, Astrobiology: a multidisciplinary approach. San Franciso, Calif: Pearson Addison Wesley, 2005.

[56]

J. S. Mattick, 'Small regulatory RNAs in mammals', Human Molecular Genetics, vol. 14, no. suppl_1, pp. R121–R132, Apr. 2005, doi: 10.1093/hmg/ddi101.

[57]

A. Hüttenhofer, P. Schattner, and N. Polacek, 'Non-coding RNAs: hope or hype?', Trends in Genetics, vol. 21, no. 5, pp. 289–297, May 2005, doi: 10.1016/j.tig.2005.03.007.

[58]

J. C. G. Walker, P. B. Hays, and J. F. Kasting, 'A negative feedback mechanism for the long-term stabilization of Earth's surface temperature', Journal of Geophysical Research, vol. 86, no. C10, 1981, doi: 10.1029/JC086iC10p09776.

[59]

J. K. Willenbring and F. von Blanckenburg, 'Long-term stability of global erosion rates and weathering during late-Cenozoic cooling', Nature, vol. 465, no. 7295, pp. 211–214, May 2010, doi: 10.1038/nature09044.