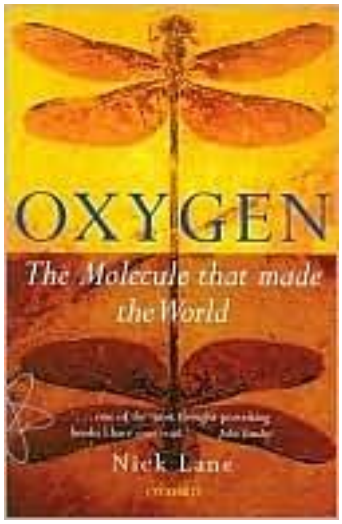
Oxygen



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著者:Nick Lane

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Drawing on a grand evolutionary canvas, Oxygen offers fresh perspectives on life and death, explaining modern killer diseases, why we age, and what we can do about it. Advancing revelatory new ideas, following chains of evidence, the book ranges through many disciplines, from environmental sciences to molecular medicine. The result is a captivating vision of contemporary science and a humane synthesis of our place in nature. This remarkable book will redefine the way we think about the world.

作者介绍:

Dr Nick Lane is a British biochemist and writer. He was awarded the first Provost's Venture Research Prize in the Department of Genetics, Evolution and Environment at University College London, where he is now a Reader in Evolutionary Biochemistry. Dr Lane’ s research deals with evolutionary biochemistry and bioenergetics, focusing on

the origin of life and the evolution of complex cells. Dr Lane was a founding member of the UCL Consortium for Mitochondrial Research, and is leading the UCL Research Frontiers Origins of Life programme. He was awarded the 2011 BMC Research Award for Genetics, Genomics, Bioinformatics and Evolution, and the 2015 Biochemical Society Award for his sustained and diverse contribution to the molecular life sciences and the public understanding of science.

Nick Lane is the author of three acclaimed books on evolutionary biochemistry, which have sold more than 100,000 copies worldwide, and have been translated into 20 languages.

Nick's first book, Oxygen: The Molecule that Made the World (OUP, 2002) is a sweeping history of the relationship between life and our planet, and the paradoxical ways in which adaptations to oxygen play out in our own lives and deaths. It was selected as one of the Sunday Times Books of the Year for 2002.

His second book, Power, Sex, Suicide: Mitochondria and the Meaning of Life (OUP, 2005) is an exploration of the extraordinary effects that mitochondria have had on the evolution of complex life. It was selected as one of The Economist's Books of the Year for 2005, and shortlisted for the 2006 Royal Society Aventis Science Book Prize and the Times Higher Young Academic Author of the Year Award.

Nick's most recent book, Life Ascending: The Ten Great Inventions of Evolution (Profile/Norton 2009) is a celebration of the inventiveness of life, and of our own ability to read the deep past to reconstruct the history of life on earth. The great inventions are: the origin of life, DNA, photosynthesis, the complex cell, sex, movement, sight, hot blood, consciousness and death. Life Ascending won the 2010 Royal Society Prize for Science Books, and was named a Book of the Year by New Scientist, Nature, the Times and the Independent, the latter describing him as “one of the most exciting science writers of our time.”

Nick's next book, due to be published in 2015 by Norton and Profile, is entitled The Vital Question. Why is life the way it is? It will attack a central problem in biology - why did complex life arise only once in four billion years, and why does all complex life share so many peculiar properties, from sex and speciation to senescence?

Nick was also a co-editor of Life in the Frozen State (CRC Press, 2004), the first major text book on cryobiology in the genomic era.

Peer-reviewed articles by Nick Lane have been published in top international journals, including Nature, Science and Cell, and he has published many features in magazines like New Scientist and Scientific American. He has appeared regularly on TV and radio, and speaks in schools and at literary and science festivals. He also worked for several years in the pharmaceutical industry, ultimately as Strategic Director of Medi Cine, a medical multimedia company based in London, where he was responsible for developing interactive approaches to medical education.

Nick is married to Dr Ana Hidalgo-Simon and lives in London with their two young sons, Eneko and Hugo. He spent many years clinging to rock faces in search of fossils and thrills, but his practical interest in palaeontology is rarely rewarded with more than a devil’s toenail. When not climbing, writing or hunting for wild campsites, he can occasionally be found playing the fiddle in London pubs with the Celtic ensemble Probably Not, or exploring Romanesque churches.

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评论

以生物化学零基础俩月啃下这本书我容易么我。这人是真不拿读者当外行啊，什么专业名词都往上招呼，头回被一本科普书折磨的死去活来。还想看他后头几本呢，不过得歇会，我先找两本小说看看。

生物抗氧化机制的起源；自由氧形成的历史；氧气与多细胞生物的演化；氧是性起源的关键；繁殖和衰老的关系；线粒体是性别的根源；如何抗衰老（提示：关键在线粒体）；当前医学过于专注基因，只见树木不见森林，应该站在进化的角度理解衰老以及衰老相关疾病，从生化出发，结合免疫系统、氧化应激等机制，从线粒体着手抗衰老。从个

人角度来说，抗氧化药物对抗衰老没大用，一些大众关于健康生活方式的智慧有道理（适当运动，丰富膳食）。

看看

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done

虽然读书不多，但毫无疑问，这是我读过的最好的一本。伟大伟大伟大伟大伟大伟大伟大伟大伟大...

阅读的第三本该作者的书，也是在生化层面探讨生物进化。虽然主题和另两本书有重合，但论证的切入角度和证据却并不完全相同。看得出虽然本书面向非专业读者，但作者并没有一味简化内容，毕竟有些内容简化论证过程后完全没有新意甚至没有说服力。并且作者在写这几本书时，似乎也还在思考和发展自己的观点。作者在论证时，不断地自我质问并提出证据解决这些质问，让整个推理过程十分精彩。我对手头该作者的另一本书依然充满着浓厚的兴趣和期待。

路上读书解读：
不是小广告，自从有了路上读书，和外国同事讨论纽约时报畅销书，再也不会语塞。吐血推荐。

主要是关于生物演化，涉及地质气候、生物化学等许多领域。笔记在goodreads.com

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书评

路上读书解读：
1.先问大家一个问题：有一样东西，我们离了它活不了，如果太多了呢就活不成，生命

演化要靠它推动，动植物呼吸都离不开它，但是呢，它也能一瞬间引发大火将一切化为灰烬，你猜到它是什么了吗？没错，它就是我们无时无刻不在呼吸的氧气。
第一，氧气如何在40亿年...

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