

<<基础生命科学>>

图书基本信息

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## 前言

The 21 st century has often been called the century of life science. Our understanding of the living world is growing explosively. Every day , we hear about significant progress in life science research. This book , Essentials of life Science , is our attempt to capture the milestones in life science and to bring the excitement of life science research into university classrooms. This book is designed as a general biology textbook for non-biology students , as well as an introductory textbook for students majoring in the diverse fields of biological science such as agriculture , forestry , animal science , biotechnology , and medicine. The organization and writing of this book reflect the following underlying principles: 1. Use simple language and figures to illustrate complex biological issues. To help students learn , we have attempted to use simple language to illustrate complex concepts. We also believe in the mantra that "a picture speaks a thousand words". Throughout the book , we have used color figures to illustrate key concepts and biological processes. To facilitate both teaching and learning , we have included a set of computer disk files containing: 20 sets of powerpoint files; 538 color figures; blueprints for making your own enhanced powerpoint files; a teaching video called "Entering the Age of Life Science"; and a comprehensive set of 270 overheads with 582 pictures. 2. Emphasize both fundamental biological principles and current research efforts and trends. To ensure that students have a broad exposure to and background in biology , we have put great emphasis on fundamental principles in biology. However , we believe basic background knowledge in biology is insufficient for modern university students. Therefore , we have introduced up-to-date information on current research efforts and potential breakthroughs in many areas. It is our hope that this book will serve as a springboard to guide students developing interests in many advanced fields of biology.

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## 内容概要

本书是吴庆余编著的《基础生命科学》的英文版，由加拿大McMaster University徐建平和清华大学吴庆余教授共同编写，是国内自编的第一本全彩色、面向大学本科学生的通识课英文版教材。

本书内容简单明了，通俗易懂；基础与前沿并重；从宏观到微观，再由微观回到宏观，既深入浅出，又能既见树木又见森林。

不但讲授最基本的生物学知识，还特别介绍了一些著名科学家的实验设计和研究经历，以及他们获得这些知识的实验程，有助于激发学生学习的的热情和兴趣。

本书语言流畅，适合作为生物科学、生物技术、生物工程等专业的生物专业英语教材和理工、师范、农林、医学院校生命科学导论课程的双语教材，还可供研究人员与高校教师参考。

作者简介： Jianping Xu received a Bachelor's degree in Agronomy from Jiangxi Agricultural University, a Master's degree in Agricultural Microbiology from Nanjing Agricultural University, and a Ph.D. degree in Population Genetics and Evolution from University of Toronto in Canada (1997). Following 3.5 years of Postdoctoral training at Duke University in North Carolina, USA, he moved to the Department of Biology at McMaster University in Canada to become an independent investigator. He is currently an associate professor and his research focuses on understanding how microbes evolve. He has (co-) authored over 40 peer-reviewed research papers, 7 book chapters, and is editing a book titled Evolutionam Genetics of Fungi. He is the recipient of an Ontario Premier's Research Excellence Award (2002-2007) and the Young Investigator's Award of the Genetics Society of Canada (2005). His non-scientific interests include running, soccer, swimming and gardening.

## 作者简介

Jianping Xu received a Bachelors degree in Agronomy from Jiangxi Agricultural University , a Masters degree in Agricultural Microbiology from Nanjing Agricultural University , and a Ph.D. degree in Population Genetics and Evolution from University of Toronto in Canada ( 1997 ) . Following 3.5 years of Postdoctoral training at Duke University in North Carolina , USA , he moved to the Department of Biology at McMaster University in Canada to become an independent investigator. He is currently an associate professor and his research focuses on understanding how microbes evolve. He has ( co- ) authored over 40 peer-reviewed research papers , 7 book chapters , and is editing a book titled Evolutionary Genetics of Fungi. He is the recipient of an Ontario Premiers Research Excellence Award ( 2002-2007 ) and the Young Investigators Award of the Genetics Society of Canada ( 2005 ) . His non-scientific interests include running , soccer , swimming and gardening.

Qingyu Wu is a professor at the Department of Biological Sciences & Biotechnology , Tsinghua University ( from 1996 ) . He worked at Nanjing University as an assistant professor ( 1985-1988 ) , associate professor ( 1990- 1992 ) and full professor ( 1992-1996 ) . As a visiting scientist , he conducted research in the Department of Biology at William Paterson University , New Jersey , USA ( 1988-1990 ) , in the Department of Botany at Arizona State University , USA ( 1993-1994 ) , and in the Department of Biology at Niigata University in Japan ( 1997 ) . Prof. Wu has done extensive research on molecular microbiology , biogeochemistry and renewable energy from biomass. He has received numerous national grants for advanced research. In 1996 , he obtained National Science Fund for Distinguished Young Scholars. His academic achievements include over 100 papers , three awards and numerous basic research grants.

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## 编辑推荐

Essentials of Life Science is designed as an introductory biology textbook for nonbiology students as well as for students majoring in the diverse areas of biological sciences, such as agriculture, forestry, animal sciences, biotechnology, and medicine. While the focus is on fundamental concepts and principles, current research advances and future trends are also examined to allow a full appreciation of life science. All major topics of biology are covered, from biodiversity, cell chemistry, metabolism, genetics, and biotechnology to evolution, reproduction, growth and development, and ecology. The discussions are presented in a concise, easy-to-read, and interesting style to stimulate students' interest in biology. In addition, they are accompanied by over 580 color illustrations to help students learn and integrate the diverse aspects of biology.

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