

ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Advanced Genetics, Second Edition

G. S. Miglani

Audience: Senior Undergraduate/Postgraduate Students & Researchers of genetics, cytogenetics, biotechnology, biosciences, botany and zoology

2007 764 pp. 160 x 240 1400g Hb ISBN: 978-1-84265-376-0

£ 49.95 / US\$ 94.95

Advanced Trace Analysis

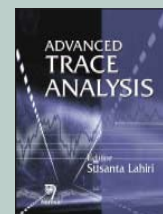
Editor: *Susanta Lahiri*



CONTENTS: Preface / Statistical Approaches in Environmental Epidemiology / Inductively Coupled Plasma Mass Spectrometry for Trace Analysis / Trace Analysis by X-ray Fluorescence / Ion Beam Analysis / Determination of Uranium Speciation in Aqueous Samples by Time-resolved Laser-induced Fluorescence Spectroscopy (TRLFS) / Trace Element Speciation using Greener Techniques / Author Index / Subject Index.

Audience: Undergraduate – Postgraduate Students & Researchers

2010 188 pp. 53Figs. 21TbIs. 185 x 240 750g Hb ISBN: 978-81-8487-029-9 £ 49.95 / US\$ 89.95



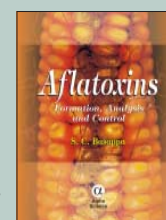
Aflatoxins: Formation, Analysis and Control

S. C. Basappa

The chemistry, metabolism, human and animal toxicoses, economic losses, global implications and future considerations of **Aflatoxins** form the introductory part of the book followed by aspects of mycology, invasion of the fungus, biosynthesis and its influencing factors, *in vitro* production and purification, natural occurrence, their state in food and affinity to macromolecules in the second part. A review of the available methods of analysis of aflatoxins in food and feed commodities is given in the third part, wherein their comparative merits are discussed in terms of sensitivity, precision, accuracy, rapidity and reliability in estimating aflatoxins. The final part on control includes: prevention of fungal infection of crops by agricultural practices, drying of foods to safe moisture, development of resistant varieties, biocontrol and other biotechnological approaches; detoxification by physical, chemical and biological methods by following certain criteria to preserve the quality of the detoxified ones; and regulatory measures by various countries, in order to make foods/ feeds safe for consumption along with the aspects of chemoprevention and metabolic detoxification of aflatoxins.

Audience: Graduate Students in Life Sciences

2009 412 pp. 19Figs. 54TbIs. 185 x 240 1000g Hb ISBN: 978-1-84265-420-0 £ 59.95 / US\$ 119.00



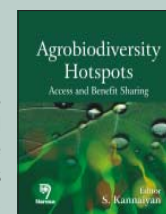
Agrobiodiversity Hotspots: Access and Benefit Sharing

Editor: *S. Kannaiyan*

CONTENTS: Foreword / Preface / Wild Rice Diversity Hotspots and Benefits / Sorghum and Millet Genetic Resources Management / Cotton Genetic Resources in India / Biodiversity in Indigenous Castor / Indigenous Safflower and its Wild Species / Agrobiodiversity Hotspots / Farmer's Variety, Folk Varieties, Land Races and Varieties of Common Knowledge in the Context of Plant Variety Protection / Agrobiodiversity Hotspots in Eastern Ghats: Issues and Challenges / Access and Benefit Sharing / Agrobiodiversity and Access and Benefit Sharing / Western Ghats: A Mega Diversity Hotspot in India for Horticultural Crops / Diversity of Tuber Crops and Wild Relatives / Biodiversity of Piper Species in India / Current Concern of Biodiversity of Medicinal Plants in India / Biodiversity of Oyster, Paddy Straw and Milky Mushroom / Exploring the Biogeographical Diversity of *Trichoderma* for Human Welfare / Biodiversity of *Bacillus thuringiensis* / Use of Traditional Knowledge of Plant Genetic Resources in Agro Biotechnological Innovations and Sharing Benefits / Systematic Documentation of Traditional Knowledge Associated with Biodiversity, Kani Model of Access and Benefit Sharing / Biodiversity of Spices and Conservation / Agrobiodiversity Hotspots Management and Procedures for Access and Benefit Sharing / Genetically Modified (GM) Crops and Biosafety.

Audience: Graduate Students & Teachers in Agriculture and Botany

2009 322 pp. 34Figs. 64TbIs. 185 x 240 770g Hb ISBN: 978-81-7319-916-5 £ 69.95 / US\$ 139.95



Prices and Pub Dates subject to change

ISBN Prefix: Alpha Science — 978-1-84265; Narosa — 978-81-7319, 978-81-85198, 978-81-8487

USD Price valid for North America Only / GBP Price valid for Rest of the World

www.alphasci.com

ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Alternate Energy Processes in Chemical Synthesis

Microwave, Ultrasonic and Photo Activation

V. K. Ahluwalia, R. S. Varma

Audience: Graduate Students in Chemistry & Chemists

2008 234 pp. 160 x 240 650g Hb ISBN: 978-1-84265-434-7

£ 39.95 / US\$ 79.95

Analysis of Water Distribution Networks

P. R. Bhawe, R. Gupta

Audience: Undergraduate – Postgraduate Students in Civil Engineering

2006 536 pp. 185 x 240 1200g Hb ISBN: 978-1-84265-359-3

£ 39.95 / US\$ 79.95

Animal Cell Culture: *Concept and Application*

Sheelendra Mangal Bhatt

FORTHCOMING

TEXTBOOK

CONTENTS: Development of Animal Cell Culture / Cell Culture Laboratory / Contamination and Sterilization of Culture Material / Culture Environment / Techniques and Assay in Tissue Culture / Maintenance of Cell Culture / Isolation of Explant / Growth Kinetics of Cell in Culture / Culture of Specific Cell Type / Cloning of Animal Cell / Cell to Cell Communications / Organ Culture / Hybridoma Technology / Application of Animal Cell Culture / Stem Cell Culture / Assisted Reproductive Technology / Gene Therapy / Modern Vaccines / Cell Synchronization / Gene Knock out Method / Cloning / Promoter for Gene Expression.



Audience: Undergraduate & Postgraduate Students of Veterinary Science and Biotechnology

2011 300 pp. 185 x 240 Hb ISBN: 978-1-84265-488-0

£ 32.50 / US\$ 64.95

Animal Physiology

R. C. Sobti

Audience: Postgraduate and Doctoral Students and Researchers

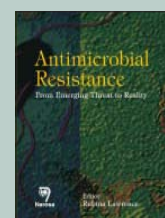
2008 960 pp. 623 Figs. 50 Tbls. 185 x 240 1750g Hb ISBN: 978-1-84265-093-6 £ 74.95 / US\$ 149.95

Antimicrobial Resistance: *From Emerging Threat to Reality*

Editors: Rubina Lawrence, A. K. Gulati, Gerard Abraham

NEW

The multi-faceted issue of antimicrobial resistance has fast gained momentum and emerged as a potential global threat. An effort has been made through this compilation, to foray into the realm of renegade microbes that have threatened to wreak havoc worldwide. The contributory papers are descriptive of the incidences of resistant pathogens in the health care sector, agriculture, environment and food, and mechanisms of their evolved resilience. Alternative methods to curb the menace and strategies that might help mitigate the situation have also been discussed and reviewed.



Audience: Postgraduate Students, Researchers and Teachers in Medicine and Life Sciences

2010 360 pp. 56 Figs. 79 Tbls. 185 x 240 850g Hb ISBN: 978-81-8487-060-2 £ 54.95 / US\$ 98.95

Basic Bioinformatics

S. Ignacimuthu s. j.

TEXTBOOK

Audience: Undergraduate - Graduate Students and Teachers in Computational Biology and Bioinformatics

2005 206 pp. 44Figs. 16Tbls. 185 x 240 550g Hb ISBN: 978-1-84265-231-2 £ 24.95 / US\$ 44.95

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ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Bioanalytical Techniques

M. L. Srivastava

Audience: Undergraduate & Postgraduate Students

2008 458 pp. 85Figs. 30TbIs. 185 x 240 980g Hb ISBN: 978-1-84265-425-5 £ 44.95 / US\$ 89.90

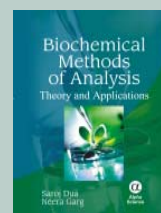
Biochemical Methods of Analysis: *Theory and Applications*

Saroj Dua, Neera Garg

NEW

TEXTBOOK

BIOCHEMICAL METHODS OF ANALYSIS: *Theory and Applications* discusses various analytical techniques like Dialysis and Ultrafiltration, Colorimetry and Spectrophotometry, Chromatography, Electrophoresis, Centrifugation and Radioisotopic techniques that are carried out in biochemistry. The book contains several features intended to assist students in learning these techniques which can be useful for both theoretical and practical purposes. These techniques are described in detail emphasizing the principles on which each technique is based, how it is carried out, apparatus set up, solutions/chemicals used etc. Useful applications of techniques in everyday life have also been stressed upon. Each chapter concludes with a selection of suggested readings.



Audience: Students, Teachers and Researchers in Life Sciences and Chemistry

2010 220 pp. 75Figs. 25TbIs. 185 x 240 570g Hb ISBN: 978-1-84265-590-0 £ 22.50 / US\$ 39.95

Biochemistry

Dushyant Kumar Sharma

TEXTBOOK

CONTENTS: Preface / Introduction / Part I: Biomolecules – Physical Properties of Molecules / Carbohydrates / Lipids / Amino Acids / Proteins / Enzymes / Vitamins / Hormones / Alkaloids / Prostaglandins / Nucleic Acids / Part II: Bioenergetics and Metabolism – Metabolism of Carbohydrates / Metabolism of Lipids / Metabolism of Proteins / Metabolism of Nucleic Acids / Inborn Errors of Metabolism / Part III: Gene Concept and Gene Expression – Gene Concept / Replication and Transcription of DNA / Translation: Protein Synthesis / Part IV: Techniques – Chromatography / Spectrophotometry / Electrophoresis / Glossary / Index.



Audience: Undergraduate & Postgraduate Students of Chemistry, Life Sciences and Medicine

2009 280 pp. 84Figs. 17TbIs. 185 x 240 700g Hb ISBN: 978-1-84265-510-8 £ 44.95 / US\$ 89.95

Biodiversity and Insect Pest Management

Editors: S. Ignacimuthu, s.j., S. Jayaraj

Audience: Graduate Students & Researchers in Life Science and Environmental Science

2006 412 pp. 185 x 240 1100g Hb ISBN: 978-81-7319-776-5 £ 54.95 / US\$ 110.00

Biodiversity to Biotechnology: *Intellectual Property Rights*

Editors: Aravind Kumar, Govind Das

NEW

Biodiversity to Biotechnology: Intellectual Property Rights contains well researched articles on Intellectual Property Rights in the domain of Traditional knowledge. Reflecting concern and extensive efforts of researchers to protect traditional riches of the country, the articles present indepth studies and advances made in biotechnology to further enrich our intellectual capital in health care, genome conservation and germplasm transfer etc. This book is invaluable for those with an interest in understanding indigenous knowledge in IPR system, biodiversity conservation and biotechnology transfer.



Audience: Undergraduate & Postgraduate Students of Chemistry, Life Sciences and Medicine

2010 276 pp. 185 x 240 750g Hb ISBN: 978-81-8487-077-0 £ 55.00 / US\$ 98.00

Prices and Pub Dates subject to change

ISBN Prefix: Alpha Science — 978-1-84265; Narosa — 978-81-7319, 978-81-85198, 978-81-8487

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ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Bioethics

S. Ignacimuthu, s.j.

NEW

CONTENTS: Introduction / Acknowledgement / **History and Principles:** Definitions / Goals / History / Principles / Approaches / Need / Facing Problems and Finding Solutions / **Issues Concerning Reproduction, Birth, Life and Death:** Artificial Insemination and Egg Donation / *In vitro* Fertilization and Embryo Transplants / Freezing Germ Cells and Human Embryos / Surrogate Motherhood and Womb Leasing / Genetic Testing and Counselling / Prenatal Diagnosis and Sex Selection / Abortion / Therapeutic Procedures for Sustaining Life / Euthanasia / **Issues Concerning Health and Biomedical Innovations:** Organ Transplants / Stem Cells / Human Genome Project / Gene Therapy / Cloning / Genetic Engineering, Biosafety and Experimentation: Genetic Engineering / Biosafety / Experimentation/ Biodiversity, Intellectual Property Rights and Environment: Biodiversity / Intellectual Property Rights (IPR) / Environment / Study Questions / References / Index.



Audience: Students in Biology, Biotechnology, Engineering, Medical and Law

2009 208 pp. 185 x 240 550g Hb ISBN: 978-1-84265-522-1

£ 29.95 / US\$ 59.95

Bioinformatics

Darbeshwar Roy

TEXTBOOK

Bioinformatics provides in depth coverage of the principles and applications of bioinformatic analyses of nucleic acid and protein sequences, databases and data mining. Dynamic programming algorithms of Needleman-Wunsch and Smith-Waterman, amino acid exchange matrices such as Dayhoff PAM series matrices and BLOSSUM series matrices and DOT matrix are discussed in detail along with pair-wise sequence alignment tools such as BLAST, FASTA and their variants, multiple sequence alignment tools such as CLUSTAL-W, CLUSTAL-X, SAGA, and progressive alignment and profile alignment. The book describes methods of detection and prediction of genes, ORFs, promoters, motifs, mRNA, tRNA, miRNA, their structure and function and protein structure and function using *ab initio* HMM and Neural Networks. Software programs like GeneID, Genescan, Genie, GeneModeler, GRAIL and GeneMARK for gene detection and visual mining tools available are discussed while Gene Ontology (GO) and use of sequence information for phylogenetic inferences are illustrated.



Audience: Undergraduate and Postgraduate Students, Teachers & Researchers in Biology, Biotechnology, Bioinformatics, Genetics and Agriculture

2009 252 pp. 25Figs. 24TbIs. 185 x 240 640g Hb ISBN: 978-1-84265-539-9 £ 29.95 / US\$ 59.95

Bioinformatics: Databases and Algorithms

N. Gautham

TEXTBOOK

2006 260 pp. 118Figs. 185 x 240 750g Hb ISBN: 978-1-84265-300-5 £ 49.95 / US\$ 98.00

Bioinformatics: Sequence and Structural Analysis

O. S. Deepa Gopakumar, Krishnan Namboodri

FORTHCOMING

TEXTBOOK

Bioinformatics, the application of computers in biological sciences and especially analysis of biological sequence data, is becoming an essential tool in molecular biology as genome projects generate vast quantities of data. With new sequences being added to DNA databases, on average, there is a vital requisite to convert this information into biochemical and biophysical knowledge by explaining the structural, functional of biological sequences. This book begins by introducing the most popular databases (protein and nucleic acid), information resources and analysis methods (sequence alignment and pattern recognition) currently available providing the basis for readers to progress to hands-on practical sequence analysis. It explains some basic algorithms in bioinformatics to readers who have exposure to computer science, mathematics, and statistics. The text also explains the structural bioinformatics that lies at the interface of structural biology and informatics, each of which derive their principles from highly interdisciplinary areas that goes beyond traditional bioinformatics knowledge.



Audience: Undergraduate & Postgraduate Students in Bioinformatics, Biotechnology, Biomedical Engineering and Computational Engineering

2011 450 pp. 185 x 240 Hb ISBN: 978-1-84265-490-3

£ 34.95 / US\$ 69.95

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ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Bioinformatics Computing

Editors: *Vikram Singh, Dilbag Singh, Joginder Singh*

Audience: Postgraduate Students, Teachers & Researchers in Computer Science

2007 218 pp. 23Figs. 18TbIs. 185 x 240 600g Hb ISBN: 978-81-7319-794-9 £ 34.95 / US\$ 69.95

Biomarkers

Editors: *S. V. S. Rana, Sung-Eun Lee*

FORTHCOMING

Biomarkers brings together contributions recently made in the field of molecular marker research encompassing their development, uses and applications in human health risk assessment. It includes not only the chapters on biomarkers of exposure, response and susceptibility to drugs but describes molecular markers of exposure to pesticides, heavy metals, carcinogens and endocrine disruptors. Articles from eminent scientists deal with the technical developments recently made in toxicogenomics, proteomics and metabolomics. A holistic approach has been made in selecting the articles on this fast changing subject of biomarkers.

Audience: Graduate Students in Life Sciences & Medicine

2011 350 pp. 185 x 240 Hb ISBN: 978-1-84265-412-5

£ 39.95 / US\$ 79.95



Biophysics, Second Edition

V. Pattabhi, N. Gautham

TEXTBOOK

CONTENTS: Preface to the Second Edition / Preface to the First Edition / Laws of Physics and Chemistry / Separation Techniques / Physico-Chemical Techniques to Study Biomolecules / Spectroscopy / Light Microscopy / Electron Microscopy / X-Ray Crystallography / NMR Spectroscopy / Molecular Modelling / Macromolecular Structure / Energy Pathways in Biology / Biomechanics / Neurobiophysics / Origin and Evolution of Life / Further Reading / Index.

Audience: Postgraduate Students as well as Biologists, Biochemists, Biomedical Engineers & Pharmacologists

2009 276 pp. 193Figs. 185 x 240 600g Hb ISBN: 978-1-84265-517-7 £ 59.95 / US\$ 115.00



Biotechnology

Darbeshwar Roy

NEW

TEXTBOOK

Biotechnology provides description of structure and function of the genetic material and the genome organization and discusses in detail genetic code, structural code, regulatory code, RNA world, RNA editing and DNA imprinting. Gene, its structure and expression, gene cloning, *in vitro* mutagenesis, gene tagging, gene silencing, DNA synthesis and sequencing technology as well as genome sequencing and assembly are also discussed. Molecular marker technology and its applications, structural genomics technologies including methods of analysis of SNPs and haplotypes, functional genomics technologies for studying gene function and interactions at individual gene level and at genome-wide scale and proteomics technologies are fully described. Methods of construction of pathways and networks, and protein synthesis and sequencing technology are included.

Audience: Undergraduate and Postgraduate Students, Teachers & Researchers in Biology, Biotechnology, Bioinformatics, Genetics and Agriculture

2010 980 pp. 124Figs. 58 TbIs. 185 x 240 1700g Hb ISBN: 978-1-84265-538-2 £ 79.95 / US\$ 159.95



Biotechnology: An Introduction

S. Ignacimuthu, s.j.

TEXTBOOK

Audience: Undergraduate and Postgraduate Students of Botany, Zoology, Microbiology, Biochemistry, Biotechnology, Agriculture, Environmental Science & Life Sciences Courses

2008 378 pp. 160 x 240 700g Hb ISBN: 978-1-84265-451-4

£ 27.50 / US\$ 55.00

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ISBN Prefix: Alpha Science — 978-1-84265; Narosa — 978-81-7319, 978-81-85198, 978-81-8487

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ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Biotechnology: A Textbook

M. L. Srivastava

FORTHCOMING

TEXTBOOK

2011 500 pp. 185 x 240 Hb ISBN: 978-1-84265-662-4

£ 69.95 / US\$ 129.95

Biotechnology: Principles and Applications

S. C. Rastogi

Audience: Undergraduate – Postgraduate Students & Professionals

2007 696 pp. 338Figs. 185 x 240 1300g Hb ISBN: 978-1-84265-370-8 £ 59.95 / US\$ 99.95

Biotechnology: Concepts and Applications

Editors: Ravishankar Rai Vittal, Rajeev Bhat

Biotechnology: Concepts and Applications focuses on providing comprehensive information on the advancements and facets of various aspects of 'Biotechnology' which has revolutionized the present world. The chapters include developments in pharmaceutical, animal, plant, food and environmental biotechnology.

The book offers in-depth details on Pharmacogenomics, Patho-biotechnology, Stem cells, Antisense technology, Protein engineering, Supercritical fluid extraction of biomolecules, Designing of SSF bioreactors, Bacteriocins, Antioxidants, Recombinant proteins, Whole cell biosensors, Biotechnological exploitation of mushrooms, Microbial secondary metabolites and their clinical applications, Stress tolerance in plants - their functional genomic approach, and on Biopharming and edible vaccines. Aspects relevant to environmental technology has also been covered that includes: Biofertilizer technology, Present global environmental scenario and Application of waste water in Agro-biotechnology. Updated details relevant to Bioinformatics have been discussed in the Biological Databases chapter.

Audience: Postgraduate Students, Researchers & Professionals

2009 480 pp. 105Figs. 45TbIs. 185 x 240 950g Hb ISBN: 978-1-84265-472-9 £ 49.95 / US\$ 98.95



Biotechnology of Biofertilizers

Editor: S. Kannaiyan

Audience: Students, Researchers in the field of Microbiology & Biotechnology

2002 612 pp. 47Figs. 103TbIs. 180 x 240 Hb 1040g ISBN: 978-1-84265-099-8 £ 85.00 / US\$ 165.00

Breeding Tropical and Subtropical Fruits

P. K. Ray

Audience: Students & Teachers of Pomology, Horticulture, Plant Breeding, Agriculture, Plant Genetics & Fruit Scientists

2002 338 pp. 23Figs. 73TbIs. 185 x 240 760g Hb ISBN: 978-1-84265-107-0 £ 85.00 / US\$ 170.00

Cadmium Toxicity and Tolerance in Plants

Editors: Nafees A. Khan, Samiullah

Audience: Researchers, Postgraduate Students & Professionals

2006 202 pp. 185 x 240 600g Hb ISBN: 978-1-84265-317-3 £ 58.00 / US\$ 120.00

Carbon Capture and Storage: R&D Technologies for Sustainable Energy Future

Editors: Malti Goel, Baleshwar Kumar, S. Nirmal Charan

Audience: Students & Researchers in Energy and Environment

2008 236 pp. 73Figs. 15TbIs. 185 x 240 750g Hb ISBN: 978-1-84265-504-7 £ 49.95 / US\$ 99.95

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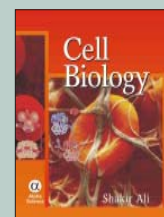
ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Cell Biology

Shakir Ali

FORTHCOMING

TEXTBOOK



Cell biology is one of the most rapidly evolving areas of life sciences. A basic understanding of the Cell, which is identified as the structural and functional unit of life, finds its application in sciences dealing with the living organisms – animals, plants or bacteria. This book provides an insight into the cell, its structure and various functions. Various cell organelles such as the plasma membrane, mitochondria, chloroplast, endoplasmic reticulum, Golgi body, nucleus and other subcellular structures are discussed in substantial details. Chapters on membrane biochemistry, cellular specialization, cell cycle, and cell differentiation are also included along with latest findings on various aspects of the subject.

Audience: Undergraduate Students

2011 200 pp. 185 x 240 Hb ISBN: 978-1-84265-342-5

£ 19.95 / US\$ 39.95

Cell Biology for Biotechnologists

Shaleesha A. Stanley

Audience: Undergraduate – Postgraduate Students of Life Sciences

2008 182 pp. 57Figs. 185 x 240 550g Hb ISBN: 978-1-84265-393-7 £ 39.95 / US\$ 79.95

Chemistry for Green Environment

Editors: M. M. Srivastava, R. Sanghi

Audience: Students, Teachers, Researchers & Professionals

2005 384 pp. 58Figs. 45TbIs. 185 x 240 950g Hb ISBN: 978-81-7319-620-1 £ 58.00 / US\$ 118.00

Chemistry of Natural Products

S. V. Bhat, B. A. Nagasampagi, S. Minakshi

Audience: Graduate, Postgraduate Students, Teachers, Researchers & Industries

2005 874 pp. 465Figs. 106TbIs. 185 x 240 1900g Hb ISBN: 978-81-7319-481-8 £ 85.00 / US\$ 170.00

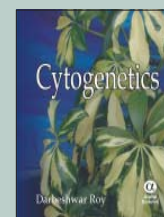
Cytogenetics

Darbeshwar Roy

Cytogenetics, starting with description of structure and function of eukaryotic and prokaryotic cells discusses mitosis, meiosis, cell cycle and chromosome behavior during cell division. Chromosome morphology, its organization and chromosome banding techniques are discussed in detail. Mendel's laws of heredity and the phenomena leading to deviation from Mendelian segregation, genetic recombination, its mechanisms and construction of genetic map are described along with a detailed discussion on variations in chromosome number (euploidy-auto- and allopolyploidy, aneuploidy, haploidy) and structural variations in chromosomes (duplication, deletion/deficiency, inversion and reciprocal translocation). Cytogenetic structures of a few crops are also given and methods provided for genomic and subgenomic manipulation for practical purposes. Also discussed in this book are the production of 2n gametes, its application and endosperm genetics and various cytological techniques which will help in conducting practical classes in cytogenetics.

Audience: Undergraduate – Postgraduate Students, Teachers & Researchers in Biotechnology

2009 280 pp. 76Figs. 185 x 240 600g Hb ISBN: 978-1-84265-487-3 £ 29.95 / US\$ 59.95



Cytology and Genetics

S. Sen, D. K. Kar

General Editor: B.M. Johri

TEXTBOOK

Audience: Undergraduate Students of Botany

2005 416 pp. 260Figs. 33TbIs. 160 x 240 800g Hb ISBN: 978-1-84265-154-4 £ 38.00 / US\$ 75.00

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ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Deep Roots, Open Skies: *New Biology in India*

Editors: *S. K. Basu, J. K. Batra, D. M. Salunke*

Audience: Students and Researchers

2004 200 pp. 185 x 240 720g Hb ISBN: 978-81-7319-604-1 £ 85.00 / US\$ 160.00

Developmental Biology



T. Subramoniam

Audience: Undergraduate, Postgraduate Students & Teachers

2002 168 pp. 59Figs. 160 x 240 550g Hb ISBN: 978-1-84265-070-7 £ 29.95 / US\$ 59.95

Ecology, *Second Edition*

N. S. Subramanyam, A. V. S. S. Sambamurty



Audience: Undergraduate Students

2006 664 pp. 160 x 240 1000g Hb ISBN: 978-1-84265-320-3 £ 39.50 / US\$ 79.95

Elementary Biophysics: *An Introduction*

P. K. Srivastava



Audience: Undergraduate & Postgraduate Students

2005 252 pp. 88Figs. 185 x 240 700g Hb ISBN: 978-1-84265-193-3 £ 29.95 / US\$ 59.95

Energy, Environment and Development: *A Technological Perspective*

Editors: *B. Sudhakara Reddy, P. Balachandra*

Audience: Researchers, Planners & Technocrats

2006 355 pp. 41Figs. 32TbIs. 185 x 240 850g Hb ISBN: 978-81-7319-747-5 £ 59.50 / US\$ 120.00

Environmental Microbiology

P. D. Sharma



Book in 2 Colour

Audience: Undergraduate, Postgraduate Students & Teachers

2005 382 pp. 139Figs. 52TbIs. 185 x 240 950g Hb ISBN: 978-1-84265-276-3 £ 37.50 / US\$ 74.50

Environmental Pollution: *Health and Toxicology*

S. V. S. Rana



Audience: Undergraduate – Graduate Students, Researchers & Professionals in Ecology, Environmental Pollution, Public Health, Ecotoxicology & Human Toxicology

2006 285 pp. 48Figs. 51TbIs. 185 x 240 760g Hb ISBN: 978-1-84265-243-5 £ 35.00 / US\$ 69.95

ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Environmental Science: A New Approach

Pushpa Dahiya, Manisha Ahlawat

FORTHCOMING

TEXTBOOK



ENVIRONMENTAL SCIENCE: *A New Approach* is an attempt to integrate information from various disciplines of Environmental Studies like Natural resources, Ecosystem Ecology, Pollution and its Types, Sustainable development and population studies, etc. with special focus on Control measures of Pollution, Environmental ethics, Environmental Protection & Conservation Acts and critically evaluates the status of Biodiversity at local, national & global level along with conservation Strategies. Topics like global warming, climate change and ozone layer depletion are the heart of this book. This simplified book on Environmental Sciences will definitely be of great help to the readers.

Audience: Undergraduate and Postgraduate Students

2011 250 pp. 185 x 240 Hb ISBN: 978-1-84265-626-6

£ 34.95 / US\$ 64.95

Environmental Studies

S. P. Agarwala

TEXTBOOK

Audience: Undergraduate – Postgraduate Students, Teachers & Researchers

2006 228 pp. 51Figs. 40TbIs. 185 x 240 600g Hb ISBN: 978-1-84265-363-0 £ 29.95 / US\$ 59.95

Essentials of Environmental Science

N. Vasudevan

TEXTBOOK

Audience: Undergraduate – Postgraduate Students, Researchers & Professionals

2006 308 pp. 139Figs. 71TbIs. 185 x 240 800g Hb ISBN: 978-1-84265-290-9 £ 34.95 / US\$ 69.95

Experimental Biology: A Laboratory Manual

Abhijit Dutta

TEXTBOOK

Experimental Biology: A Laboratory Manual provides a theoretical basis of various practical in a lucid manner at graduate and postgraduate levels. This includes Immunology, Microbiology, Animal Cell Culture, Biochemical Techniques, Separation and Analytical Techniques, Haematology, and Physiology. The methods are detailed completely in a step-by-step format that allows the students to perform experiments without reference to any secondary source. The reagents and 7th chemicals are specified with exact methods of preparation so that no further calculations are necessary. The book contains several relevant figures, flow diagrams and charts to aid the students.



Audience: Undergraduate & Postgraduate Students in Zoology / Biology / Biotechnology and Allied Fields

2009 326 pp. 65Figs. 185 x 240 850g Hb ISBN: 978-1-84265-432-3 £ 29.95 / US\$ 59.95

Experiments in Plant Physiology: A Laboratory Manual

D. Bajracharya

TEXTBOOK

Audience: Undergraduate & Graduate Students & Teachers

1999 186 pp. 48Figs. 140 x 215 250g Pb ISBN: 978-81-7319-310-1 £ 18.00 / US\$ 35.00

Fermentation Technology

M. L. Srivastava

Audience: Postgraduate Students of applied biology, biotechnology, microbiology, biochemical & chemical engineering

2008 404 pp. 22Figs. 32TbIs. 185 x 240 850g Hb ISBN: 978-1-84265-426-2 £ 59.95 / US\$ 120.00

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ISBN Prefix: Alpha Science — 978-1-84265; Narosa — 978-81-7319, 978-81-85198, 978-81-8487

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www.alphasci.com

ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Fish Spermatology

Editors: S. M. H. Alavi, J. Cosson, K. Coward, G. Rafiee

Audience: Students & Researcher in Zoology, Ecology, Sensory Physiology, Comparative Neurobiology & Ichthyology

2008 484 pp. 86Figs. 26TbIs. 185 x 240 1350g Hb ISBN: 978-1-84265-369-2 £ 85.00 / US\$ 170.00

Functional Avian Endocrinology

Editors: A. Dawson, Peter J Sharp

Audience: Ornithologists, Biologists, Zoologists

2005 460 pp. 124Figs. 13TbIs. 1100g Hb ISBN: 978-81-7319-568-6 £ 98.00 / US\$ 170.00

Functional Magnetic Resonance Imaging: Novel Transform Methods

Ajay V. Deshmukh, Vikram M. Gadre

Audience: Graduate Students, Teachers, Researchers & Professionals

2008 130 pp. 78Figs. 12TbIs. 160 x 240 400g Hb ISBN: 978-81-7319-865-6 £ 44.95 / US\$ 89.95

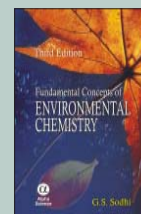
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G. S. Sodhi

CONTENTS: Preface to the Third Edition / Preface to the First Edition / Acknowledgements / **Part I: Abiotic Origin:** Atoms and Molecules / Solid Earth / Hydrosphere / Atmosphere / Biosphere / **Part II: Biotic Origin:** Life / Cellular Environment / Cellular Alterations / **Part III: Energy:** Energy Flow / Fossil Fuels / Terrestrial Energy / Solar Energy / Nuclear Energy / **Part IV: Air Pollutants:** Sulfur Oxides / Nitrogen Oxides / Carbon Monoxide / Photochemical Smog / Greenhouse Gases / Depletion of Stratospheric Ozone / Suspended Matter / Indoor Pollution / Hydrocarbons / **Part V: Water Pollutants:** Classification of Water Pollutants / Heavy Metals / Soaps and Detergents / Paper Mills / Groundwater Pollution / Water Treatment / **Part VI: Pollutants From Industry:** Polymers and Plastics / Asbestos / Polychlorinated Biphenyls / Food Additives / Mining Operations / **Part VII: Pollutants From Agriculture:** Fertilizers / Insecticides / Fungicides and Herbicides / **Part VIII: Waste Management:** Solid Waste / Hazardous Waste / **Part IX: Unconventional Pollutants:** Noise Pollution / Light Pollution / **Part X: Environmental Restoration:** Is it Possible? / International Efforts / India's Efforts / Index.

Audience: Graduate & Postgraduate Students

2009 602 pp. 164Figs. 66TbIs. 160 x 240 1100g Hb ISBN: 978-1-84265-394-4 £ 44.95 / US\$ 79.95



Fundamentals of Genetics

Gurbachan S. Miglani

TEXTBOOK

Audience: Teachers, Students, Research workers in Conventional & Agricultural Universities

2008 660 pp. 265Figs. 100TbIs. 185 x 240 1240g Hb ISBN: 978-1-84265-411-8 £ 39.95 / US\$ 79.95

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P. D. Sharma

TEXTBOOK

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2005 557 pp. 293Figs. 41TbIs. 185 x 240 1200g Hb ISBN: 978-1-84265-277-0 £ 42.50 / US\$ 85.00

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10

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ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

The Fungi, Second Edition

G. Sumbali

General Editor: B. M. Johri †

NEW

TEXTBOOK



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Audience: Undergraduate Students of Botany

2010 356 pp. 140Figs. 24TbIs. 185 x 240 840g Hb ISBN: 978-1-84265-597-9 £ 34.95 / US\$ 64.95

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M. L. Srivastava

FORTHCOMING

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A. V. S. S. Sambamurty

TEXTBOOK

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2005 930 pp. 349Figs. 62TbIs. 185 x 240 1800g Hb ISBN: 978-1-84265-210-7 £ 39.95 / US\$ 79.95

Genomics and Proteomics Techniques: In Post Genomics Era

R. S. Dassanayake, Y. I. N. Silva Gunawardene

FORTHCOMING

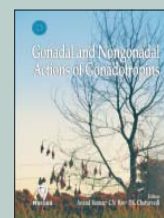
TEXTBOOK

2011 200 pp. 160 x 240 Hb ISBN: 978-1-84265-660-0 £ 44.95 / US\$ 84.95

Gonadal and Nongonadal Actions of Gonadotropins

Editors: Anand Kumar, C. V. Rao, P. K. Chaturvedi, Ashutosh Halder, Nafis Rahman

NEW



Gonadal and Nongonadal Actions of Gonadotropins offers latest information on the structure and function of the gonadotropins, their signal transduction, and action at cellular and molecular levels. The topics include endometriosis, premature ovarian failure, PCOS, cryptorchidism, genetic and intersex disorders, assisted reproduction, immune functions, bone remodeling, dementia and Alzheimer's disease, and cancers, in relation to these molecules.

Audience: Graduate Students, Researchers and Professionals in Reproductive Biology

2010 380 pp. 74Figs. 35TbIs. 185 x 240 820g Hb ISBN: 978-81-7319-983-7 £ 74.95 / US\$ 149.95

Green Chemistry: Environment Friendly Alternatives

Editors: R. Sanghi, M. M. Srivasatava

Audience: Students of Chemistry & Environmental Science

2003 375 pp. 63Figs. 30TbIs. 160 x 240 700g Hb ISBN: 978-81-7319-523-5 £ 55.00 / US\$ 110.00

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Green Solvents: For Organic Synthesis

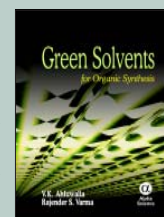
V. K. Ahluwalia, Rajender S. Varma

CONTENTS: Preface / PART-I: Use of Water as a Solvent for Organic Reaction / Organic Reaction in Super Critical Water or in Near Water Region / Microwave Assisted Organic Reactions in Water / Organic Synthesis using Biocatalysts / PART-II: Organic Synthesis in Super Critical Carbon Dioxide / Organic Synthesis using Carbon Dioxide / PART-III: Organic Synthesis using Ionic Liquids / PART-IV: Polyethylene Glycol and its Solutions as Green Reaction Medium of Future / PART-V: Organic Synthesis using Fluorous Phase Techniques / Index.

Audience: Postgraduate Students & Researchers in Chemistry, Environmental Science and Green Chemistry

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G. N. Tiwari

TEXTBOOK

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Ghulam Hassan Dar, Masudul Haq Wani

Audience: Graduate Students, Teachers & Researchers

2007 176 pp. 185 x 240 550g Hb ISBN: 978-81-7319-754-3

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Human Genetics: An Overview

Alice Marcus

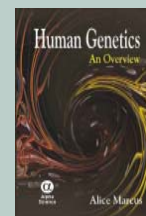
NEW

TEXTBOOK

Human Genetics provides an insight into the basic human genetics, common genetic disorders, the inheritance pattern, the genetic basis for the diseases, the sensitive periods in human development, the detection of the diseases and the mechanism of genetic variation and deals with the heritable nature of most of the diseases. The book highlights the Human genome project with its social implications. The proposed model for human cloning and stem cells as 21st century medicine for genetic diseases and describes the process of genetic counseling and the treatment methods undertaken in dealing with the genetic disorders. The ethical issues related to genetic counseling are also presented.

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C. V. Rao

TEXTBOOK

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C. V. Rao

TEXTBOOK

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Jayababu Mudili

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A. Verma

TEXTBOOK

Audience: Undergraduate & Postgraduate Students

2005 532 pp. 431Figs. 13TbIs. 185 x 240 1325g Hb ISBN: 978-1-84265-200-8 £ 49.95 / US\$ 99.95

The Mangroves: Biology and Biogeography

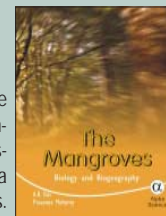
A. B. Das, Prasanna Mohanty

FORTHCOMING

The Mangroves: Biology and Biogeography gives an up-to-date overview of the biology of mangrove systems around the world with special references to the Indian sub-continent covering morphology, taxonomy, cell physiology, cytology, cytochemistry, phytochemistry and molecular biological details in different species of mangroves. The text is very clear and lively, illustrated with relevant anecdotes as well as a large numbers of photographs of almost all the living plant species of mangrove flora and drawings supplemented with ample references for further reading for audiences related to generalised and specific fields.

Audience: Graduate Students & Researchers

2011 450 pp. 185 x 240 Hb ISBN: 978-1-84265-433-0 £ 59.95 / US\$ 120.00



Metal Ions in Biochemistry

P. K. Bhattacharya

Audience: Postgraduate Students & Researchers in Chemistry, Biochemistry, Biotechnology & Medicine

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Microarray Data: Statistical Analysis Using R

Shailaja R. Deshmukh, Sudha G. Purohit

TEXTBOOK

Audience: Postgraduate Students in Statistics, Life Sciences, Bio-medicine, Biotechnology & Computer Sc.

2007 340 pp. 185 x 240 800g Hb ISBN: 978-1-84265-423-1 £ 37.50 / US\$ 75.00

Microbial Biochemistry

M. L. Srivastava

Audience: Undergraduate and Postgraduate Students

2008 528 pp. 49Figs. 65TbIs. 185 x 240 1050g Hb ISBN: 978-1-84265-424-8 £ 44.95 / US\$ 89.95

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Modern Plant Physiology

R. K. Sinha

TEXTBOOK

Audience: Undergraduate & Postgraduate Students of Plant Physiology

2004 635 pp. 285Figs. 185 x 240 1400g Hb ISBN: 978-1-84265-029-5 £ 55.00 / US\$ 99.95

Molecular and Cellular Neurobiology

Editors: M. K. Thakur, S. Prasad

Audience: Students, Teachers & Researchers

2005 329 pp. 64Figs. 27TbIs. 160 x 240 700g Hb ISBN: 978-81-7319-582-2 £ 68.00 / US\$ 135.00

Molecular Biology

A. V. S. S. Sambamurthy

TEXTBOOK

Audience: Senior Undergraduate/Postgraduate Students of Molecular Biology

2008 1240 pp. 545Figs. 109TbIs. 185 x 240 2200g Hb ISBN: 978-1-84265-414-9 £ 57.50 / US\$ 115.00

Molecular Developmental Biology

T. Subramoniam

TEXTBOOK

Audience: Undergraduate, Postgraduate Students & Teachers

2008 294 pp. 118Figs. 11TbIs. 185 x 240 750g Hb ISBN: 978-1-84265-229-9 £ 34.95 / US\$ 69.95

Molecular Genetics

A. V. S. S. Sambamurthy

Audience: Senior Undergraduate/Postgraduate Students of Molecular Genetics

2007 790 pp. 185 x 240 1600g Hb ISBN: 978-1-84265-415-6 £ 49.95 / US\$ 99.95

Molecular Physiology and Biotechnology of Flowering Plants

A. Rashid

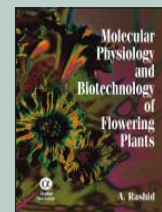
TEXTBOOK

With the advent of transgene technology, plant physiology, over the last ten years, has undergone a 'sea-change' and there is a need to 'rewrite'. *Molecular Physiology and Biotechnology of Flowering Plants* attempts to provide an up-to-date account. The first chapter "Seed Germination and Seedling: Beginning of an Establishment" discusses light and hormonal control of these processes followed by chapters on vegetative and reproductive phases of plants. In "Vegetative Phase" novel concepts such as 'Stem-cell' and 'Determination of Cell-fate' and conceptual changes concerning apical dominance and stomatal physiology, followed by "Reproductive Phase" where floral evocation, floral stimulus and gene expression during flowering are discussed.

CONTENTS: Preface / Seed Germination and Formation of a Seedling: Beginning of an Establishment / The Plant: Vegetative Phase / Reproductive Phase: Flowering / Plant Hormones: In Development and Differentiation / Transduction of Signals: Hormonal and Environmental / Stress: Perception and Tolerance / Senescence and Abscission Programmed Cell Death / Regeneration: Totipotency of Plant Cells / Novel Plants (Transgenics): Genetically Engineered (GE) or Genetically Modified (GM) Crops / Index / About the Author.

Audience: Undergraduate – Postgraduate Students of Botany, Biotechnology & Agriculture

2009 454 pp. 251Figs. 185 x 240 900g Hb ISBN: 978-1-84265-419-4 £ 44.95 / US\$ 89.95



Molecular Spectroscopy

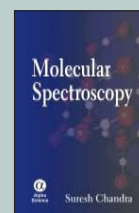
Suresh Chandra

TEXTBOOK

Molecular Spectroscopy introduces the topic in a systematic manner and discusses the Quantum Theory of Valence, Molecular Symmetry, Rotational Spectroscopy, Infrared Spectroscopy, Raman Spectroscopy, Electronic Spectra of Diatomic Molecules, Nuclear Magnetic Resonance, Electron Spin Resonance, Mössbauer Spectroscopy, Laser Spectroscopy and Photoelectron Spectroscopy. These topics, are explained with the help of simple exercises using simple language.

Audience: Post Graduate Students of Physics, Chemistry and Biotechnology, Teachers & Researchers

2009 274 pp. 112 Figs. 22TbIs. 160 x 240 570g Hb ISBN: 978-1-84265-608-2 £ 39.95 / US\$ 79.95



Natural Products: Chemistry and Applications

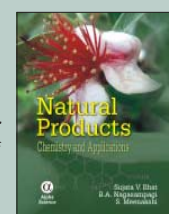
Sujata V. Bhat, B. A. Nagasampagi, S. Meenakshi

TEXTBOOK

During the last few decades the area of natural products has advanced tremendously due to contributions from the fields of Pharmaceutical Sciences, Chemistry, Life Sciences, Perfumery-flavours and Material Sciences. *Natural Products: Chemistry and Applications* provides an easy to read overview of natural products in fourteen chapters covering most of the aspects. Each chapter provides general introduction, nomenclature, occurrence, structure elucidation, synthesis, biological activity and commercial applications of natural products.

Audience: Graduate Students, Teachers, Researchers & Professionals

2009 596 pp. 338Figs. 66TbIs. 185 x 240 1150g Hb ISBN: 978-1-84265-405-7 £ 49.95 / US\$ 98.00



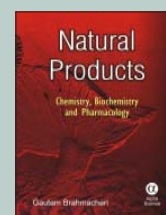
Natural Products: Chemistry, Biochemistry and Pharmacology

Editor: Goutam Brahmachari

Natural Products: Chemistry, Biochemistry and Pharmacology attempts to provide an insight into significant developments in some of the promising areas of natural products chemistry. Natural products are of great interest and promise in the present day research directed towards drug design and discovery. This book brings together, in twenty-one chapters, by leading scientists of the world, an overview of current discoveries and trends in this remarkable field. The topics, ranging from natural products chemistry and phytochemistry in their most basic form to molecular biology, pharmacology and *in silico* drug design, summarize years of extensive research in each area, and provide insight in the new themes of natural products research. The information will help predict promising leads, useful for the treatment of various ailments and disease manifestations.

Audience: Students & Researchers in Chemistry, Pharmacology, Drug Development and Medicinal Plants

2009 840 pp. 147Figs. 83TbIs. 185 x 240 1700g Hb ISBN: 978-1-84265-450-7 £ 85.00 / US\$ 170.00



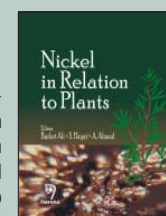
Nickel in Relation to Plants

Editor: Barkat Ali, S. Hayat, A. Ahmad

Nickel in Relation to Plants presents current advances in the study of nickel biogeochemistry, essentiality, toxicity manifestations and adoptive tolerance mechanism. The book starts with the occurrence, mobility and availability of nickel from soil environment to the plant system, followed by a description of its relative distribution and transport mechanism within the plant systems. The essential role of nickel, toxicity manifestation and plasma membrane mediated avoidance and biochemical defense strategies are also discussed. Sections have been especially devoted to the antioxidant response to the metal and explaining the toxicity of nickel on cyanobacteria and ends with some important remedial measures against the metal.

Audience: Postgraduate Students, Teachers & Researchers in Botany, Agriculture & Environmental Science

2009 200 pp. 34Figs. 36TbIs. 185 x 240 600g Hb ISBN: 978-81-7319-899-1 £ 39.95 / US\$ 79.95



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Noise Pollution and Control Strategy

S. P. Singal

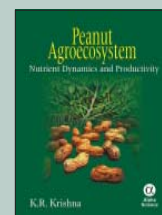
Audience: Undergraduate & Graduate Students, Environmental Engineers, Social Scientist

2005 340 pp. 65Figs. 94TbIs. 160 x 240 800g Hb ISBN: 978-1-84265-237-4 £ 39.95 / US\$ 74.95

Peanut Agroecosystem: Nutrient Dynamics and Productivity

K. R. Krishna

The 'Global Peanut Agroecosystem' is a conglomerate of Peanut cropping belts that flourish in different continents. It encompasses Peanut cropping belts of North America, Sahelian West Africa, Semi-arid India, China, Australia etc. Recent advances in Nutrient Management within each cropping belt forms core of this book. An introductory chapter highlights Historical aspects of Peanuts. Peanut Agroecosystems situated in each continent have been dealt exclusively in chapters 2 to 9. Historical background, Geographical settings, Agroclimate, Soils, Cropping systems and Productivity trends are provided at the beginning of each chapter. Aspects of Nutrient dynamics such as Soil Nutrients, Physico-chemical transformations, Nutrient fluxes, Fertilizer inputs, Organic manures, Residue recycling, Nutrient accumulations, Carryover effects, Nutrient balance/ imbalances form major part of discussions. Beneficial soil microbes and their influence on crop nutrition have been highlighted. Modeling Nutrient dynamics and Precision farming has been included. Overall, it is a scholarly edition within the realm of Global Agriculture. It highlights relevance of Nutrient dynamics to Productivity of Peanut Agroecosystem.



Audience: Students, Researchers & Professionals in Agriculture, Plant Sciences and Ecology

2009 304 pp. 34Figs. 39TbIs. 185 x 240 750g Hb ISBN: 978-1-84265-502-3 £ 59.95 / US\$ 119.95

Plant Breeding: Mendelian to Molecular Approaches

Editors: H. K. Jain, M. C. Kharkwal

Audience: Postgraduate Students, Scientists & Researchers

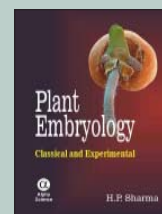
2004 824 pp. 45TbIs. 185 x 240 1900g Hb ISBN: 978-81-7319-503-7 £ 95.00 / US\$ 200.00

Plant Embryology: Classical and Experimental

H. P. Sharma

TEXTBOOK

Plant Embryology: Classical and Experimental has been written in simple language with up to date information supported with hand sketch diagrams and schematic representation of the events, classifications and tables wherever required. *Part A, Classical Embryology*, deals exclusively with the basics of plants such as structures of reproductive parts, their growth and development starting from Microsporogenesis, Megasporogenesis, Pollination, Fertilization till Embryo and Seed formation; it also includes discussion of Comparative Embryology. *Part B, Experimental Embryology*, on the other hand covers the cultures of Anther, Pollens, Ovary, Ovule, Embryo etc. which enables one to understand the mechanism of growth and development.



Audience: Undergraduate and Postgraduate Students

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Plant Genetic Resources: Foodgrain Crops

Editors: B. S. Dhillon, S. Saxena, A. Agrawal, R. K. Tyagi

Audience: Students and Researchers in Plant Genetics

2006 360 pp. 160 x 240 800g Hb ISBN: 978-81-7319-580-8 £ 79.00 / US\$ 160.00

Plant Genetic Resources: Horticultural Crops

Editors: B. S. Dhillon, R. K. Tyagi, S. Saxena, G. J. Randhawa

Audience: Students and Researchers in Plant Genetics

2005 348 pp. 102Figs. 160 x 240 800g Hb ISBN: 978-81-7319-581-5 £ 75.00 / US\$ 150.00

ENVIRONMENTAL SCIENCE / LIFE SCIENCE & BIOTECHNOLOGY

Plant Genetic Resources: *Oilseed and Cash Crops*

Editors: *B. S. Dhillon, R. K. Tyagi, S. Saxena, A. Agrawal*

Audience: Students and Researchers in Plant Genetics

2004 230 pp. 91TbIs. 160 x 240 600g Hb ISBN: 978-81-7319-565-5 £ 65.00 / US\$ 130.00

Plant Pathology

P. D. Sharma

TEXTBOOK

Book in 2 Colour

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Predicting Meteorological Events: *Mathematical Approach*

Editor: *N. C. Mahanti*

Audience: Students, Meteorologists and Scientists

2005 170 pp. 55Figs. 15Figs. 160 x 240 600g Hb ISBN: 978-81-7319-573-0 £ 55.00 / US\$ 110.00

Principles and Procedures of Plant Breeding: *Biotechnological and Conventional Approaches*

G. S. Chahal, S. S. Gosal

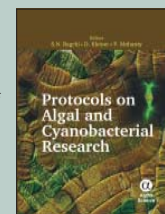
Audience: Undergraduate & Graduate Students in Plant Breeding

2002 412 pp. 45Figs. 160 x 240 1000g Hb ISBN: 978-1-84265-036-3 £ 55.00 / US\$ 110.00

Protocols on Algal and Cyanobacterial Research

S. N. Bagchi, Diethelm Kleiner, Prasanna Mohanty

NEW



PROTOCOLS ON ALGAL AND CYANOBACTERIAL RESEARCH is an up-to-date and consolidated compilation of ready-to-use protocols embodied in twenty three chapters and grouped in four sections, highlighting methods related to preparation and characterization of components, assessment of biological activities of toxins, and biotechnology utilizing algae and cyanobacteria as research material.

In the first section aspects of sub-cellular fractionation and estimation of photosynthetically active particles, phycobilisomes, carotenoids, lipids, DNA, RNA, proteins and peptides are discussed. The second section is devoted to the analysis of physiological processes namely transport and assimilation of ammonia, phosphate, nitrate and water (Solutes), and primary photochemical activity and CO₂ fixation. A variety of toxins of planktonic algae affect the ecosystem balance and human/animal life and the third section illustrates the procedures for their determination. Since microalgae can sense and respond to toxic anthropogenic compounds like heavy metals, the application of various indicator/sequestering bioassays is the highlight of the fourth section.

Audience: Undergraduate and Postgraduate Students and Researchers in Plant Biology, Microbiology, Biochemistry, Plant Biophysics, Biotechnology, Agriculture, Molecular Biology, Bioprospecting and Biofuels.

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Remote Sensing and Geographical Information System

A. M. Chandra, S. K. Ghosh

TEXTBOOK

Audience: Undergraduate – Postgraduate Students & Professionals

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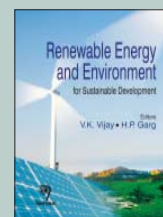
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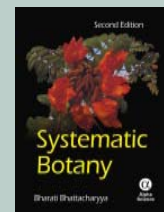
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