

**PROBLEMS OF MODERN  
SCIENCE: A SERIES  
OF LECTURES DELIVERED  
AT KING'S COLLEGE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649147731

Problems of modern science: a series of lectures delivered at King's college by Various

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

[www.triestepublishing.com](http://www.triestepublishing.com)

**VARIOUS**

**PROBLEMS OF MODERN  
SCIENCE: A SERIES  
OF LECTURES DELIVERED  
AT KING'S COLLEGE**



PROBLEMS OF  
MODERN SCIENCE

*Uniform with this Volume*

MEDIEVAL CONTRIBUTIONS  
TO MODERN CIVILISATION

Edited by F. J. C. HEARNshaw, M.A.,  
LL.D. 268 pages.

UNIV. OF  
LONDON

# PROBLEMS OF MODERN SCIENCE

A SERIES OF LECTURES DELIVERED AT  
KING'S COLLEGE (UNIVERSITY OF LONDON)

EDITED BY

ARTHUR DENDY D.Sc. F.R.S.

FELLOW OF KING'S COLLEGE AND PROFESSOR OF ZOOLOGY IN THE  
UNIVERSITY OF LONDON

GEORGE G. HARRAP & CO. LTD.  
LONDON CALCUTTA SYDNEY

TO VIND  
ABROUILLAO

Q171  
D4

*First published February 1922*  
by GEORGE G. HARRAP & Co., LTD.,  
2 & 3 Portsmouth Street, Kingway, London, W.C. 2

---

*Printed in Great Britain at THE BALLANTYNE PRESS by*  
SPOTTISWOODE, BALLANTYNE & CO. LTD.  
Colchester, London & Elton



## PREFACE

**T**HE addresses printed in this volume were delivered as public lectures at King's College in the spring term of the present year. The intention of the organisers of the course was to place before the public the present position with regard to the advancement of science in some of its main branches, and to point out the directions in which progress is actually being made or may be hoped for in the near future. No uniformity of treatment was expected, and each lecturer was left to follow his own inspiration. Some have attempted a more or less comprehensive survey of the field allotted to them, while others have concentrated their attention upon smaller areas.

It is hoped that many who were unable to be present at the lectures may be interested in this brief review of the situation at a time when, in spite of the disturbances due to the Great War and the political and social unrest which have followed it, the activity of scientific workers is perhaps greater than at any previous period in the world's history.

ARTHUR DENDY

KING'S COLLEGE, LONDON  
*July 1921*



# CONTENTS

	PAGE
I. MATHEMATICS	9
By J. W. NICHOLSON, M.A., D.Sc., F.R.S., Professor of Mathematics in the University of London (King's College).	
II. ASTRONOMY	39
By J. B. DALE, M.A., Assistant Professor of Mathematics in King's College.	
III. PHYSICS	77
By O. W. RICHARDSON, M.A., D.Sc., F.R.S., Professor of Physics in the University of London (King's College).	
IV. ORGANIC CHEMISTRY	97
By S. SMILES, O.B.E., D.Sc., F.R.S., F.I.C., Daniell Professor of Chemistry in the University of London (King's College).	
V. BIOLOGY	111
By ARTHUR DENDY, D.Sc., F.R.S., Professor of Zoology in the University of London (King's College).	
VI. BOTANY	149
By R. RUGGLES GATES, Ph.D., F.L.S., Professor of Botany in the University of London (King's College).	
VII. PHYSIOLOGY	177
By W. D. HALLIBURTON, M.D., F.R.C.P., LL.D., F.R.S., Professor of Physiology in the University of London (King's College).	
VIII. ANATOMY	205
By E. BARCLAY-SMITH, M.A., M.D., B.C. (Cantab.), Professor of Anatomy in the University of London (King's College).	