

THE EMERGENCE OF SCIENCE IN WESTERN EUROPE

Edited by MAURICE CROSLAND

This book describes how different countries and cultures, ranging from 16th-century Italy to 19th-century Germany have fostered the study of science until it emerged in a recognisably modern form as a research-orientated, university-based discipline. Unique documentary evidence of the development of science in certain countries is provided by experts drawn from the membership of the British Society for the History of Science both here and abroad.

£11.00

For further details please write to Anne Calcott, The Macmillan Press, Little Essex Street, London WC2R 3LF.



For the first time in English translations

Galileo against the Philosophers
in his Dialogue of Cecco di Ronchitti (1605)
and Considerations of Alimberto Mauri (1606)

In English translations with Introductions and Notes by

STILLMAN DRAKE

Limited edition of 750 copies in a fine typographic format

price \$32.50

Zeitlin & Ver Brugge : Publishers

815 North La Cienega Boulevard, Los Angeles, California 90069

The Book of Knowledge of Ingenious Mechanical Devices

by **AL-JAZARĪ**

Translated and annotated by **DONALD R. HILL**

Clothbound, 34,1 x 24,8 cm, XXV + 286 pp.

174 figs., 34 expl. drawings, 32 miniatures

Price: Dfl. 240,- / US \$96.00

Numbered edition

This fine book is one of the most important texts for the study of the history of technology. It presents a faithful translation of the Arabic treatise on machines written in 1206 A.D. by the engineer Al-Jazarī, who worked for the Artuqid princes of Diyar Bākr. The translation has been made principally from a manuscript in the Bodleian Library, Oxford.

All Al-Jazarī's own illustrations are carefully reproduced from the Oxford manuscript, and there are also 32 photographs of the fine miniature paintings from other manuscripts of the same work. There is full annotation, together with explanatory drawings, provided by the translator. The book ends with a Bibliography and an Index.

From the Foreword of Professor Lynn White Jr.:

"... The engineering relations between Islam and the West could never be understood until Al-Jazarī was edited. Dr. Hill, by preparing this volume, has laid a massive cornerstone for the building of a new historical topic: medieval Islamic engineering."

"Donald Hill has rendered medieval Islamic studies an invaluable service with his definitive work."

New Scientist

The book has been awarded the Dexter Prize 1974.

Brochures available



D. Reidel Publishing Company

P.O. Box 17, Dordrecht-Holland
Lincoln Building, 160 Old Derby Street,
Hingham, Mass. 02043 - U.S.A.



LEO S. OLSCHKI

STUDIO BIBLIOGRAPHICO
LUCIGNANO (AREZZO)
ITALY

ITALIAN BOOKS

INCUNABLES, ART, ARCHITECTURE
HISTORY, THEOLOGY, CLASSICS
MEDICINE, SCIENCE, LITERATURE



FINE BOOKS

CATALOGUES ISSUED



Harriet Wynter Ltd.

BUY AND SELL BOOKS ON THE HISTORY OF
SCIENCE AND SCIENTIFIC INSTRUMENTS.

Wants Lists welcome. Please write for free Book Catalogue.

Vol. 3 illustrated Instrument Catalogue available
£3 U.K. only US \$10 air-mail elsewhere

352 King's Road, Chelsea, London SW3 5UU

Tel. 01-352 6494 24 hrs.

Telex: Harriet 21879

The Solvay Conferences on Physics

Aspects of the Development of Physics since 1911

by Jagdish Mehra
with a Foreword by Werner Heisenberg

1975 xxxiv + 415 pp. LC 75-28332
Cloth Dfl. 150,- / US \$59.00 ISBN 90-277-0635-2

The Solvay Conferences on Physics not only provided the forum for discussion of fundamental problems at the frontiers of physics at given times, but were intended to contribute to a solution of the difficulties as well. Some of the greatest names in modern physics came to be associated with these conferences: Lorentz, Planck, Madame Curie, Einstein, Rutherford, Bohr, Sommerfeld, Heisenberg, Dirac, Schrödinger, de Broglie, and numerous others.

The International (Solvay) Institutes of Physics and Chemistry, Brussels, Belgium, invited Professor Jagdish Mehra to write a book dealing with the origin of the Solvay Conferences and the subjects which had been treated in all the sixteen conferences on physics held thus far (1911-1973). This book describes in detail the circumstances which led to the founding of the Conferences by Ernest Solvay and presents the contributions to each conference, together with the highlights of the discussions, so that the development of many outstanding physical conceptions of the twentieth century can be traced back to the creative moments in their development.

Audience: Physicists, historians and philosophers of science, historians of ideas, sociologists of science. Libraries.

Table of Contents

Foreword. - Introduction. - 1. Ernest Solvay and the Origin of Solvay Conferences on Physics. - 2. Radiation Theory and the Quanta. - 3. The Structure of Matter. - 4. Atoms and Electrons. - 5. The Electrical Conductivity of Metals. - 6. Electrons and Photons. - 7. Magnetism. - 8. The Structure and Properties of Atomic Nuclei. - 9. Towards the Spectrum of Elementary Particles and the Hierarchy of Interactions. - 10. The Elementary Particles. - 11. Quantum Field Theory. - 12. Fundamental Problems of Elementary Particle Physics. - 13. Symmetry Properties of Nuclei. - 14. Solid State Physics. - 15. Astrophysics, Gravitation, and the Structure of the Universe. - Index of Names.



D. Reidel Publishing Company

P.O. Box 17, Dordrecht-Holland

Lincoln Building, 160 Old Derby St., Hingham, MA 02043 - U.S.A.

THE COPERNICAN ACHIEVEMENT

Edited by Robert S. Westman

The essays gathered here to honour the 500th anniversary of the birth of the great astronomer Nicholas Copernicus well illustrate the diversity of issues that may be assembled under the rubric "Copernican Achievement". They include finely-honed technical analyses of Copernicus' astronomy; studies of his formative years; explorations of the complex question of how the new theory was received and of the equally demanding philosophical problem of establishing universal conditions according to which the Copernican theory might be compared to the Ptolemaic as a *scientific* theory; and an assessment of the historical and conceptual preconditions for a scientific revolution of the kind inaugurated by Copernicus. The contributors are Ernest S. Abers, Salomon Bochner, William H. Donahue, Maurice A. Finocchiaro, Amos Funkenstein, Owen Gingerich, John L. Heilbron, Janice Henderson, Charles F. Kennel, Paul W. Knoll, Imre Lakatos, Peter K. Machamer, Nicholas Steneck, Noel Swerdlow, Stephen E. Toulmin, Robert S. Westman, Curtis A. Wilson, Bruce Wrightsman, and Elie Zahar.

380 pages, £9.45

MARIUS ON THE ELEMENTS

Latin Text and English Translation

*Translated, Edited, and with an Introduction
by Richard C. Dales*

This is an edition, with English translation, of a unique twelfth-century MS on the four elements (earth, water, air, and fire) and their combinations. Marius' *De elementis* is important in that it forces a re-evaluation of the nature and quality of twelfth-century Latin science and the early history of European chemistry. Marius is remarkable for his naturalism, experimental bent, and extensive knowledge of natural processes. He devised a quantitative scheme to account for the variety and characteristics of compound bodies, and, although he had read much Arabic alchemical material, his own attitude was anti-magical and he specifically denied the possibility of transmutation of species. Was Marius truly unusual or typical of a fairly large but unacknowledged school? At present no one can tell, but the publication of this text will alert a large public to the importance of this question.

The editor's introduction describes the MS and its history, summarizes the contents of the work, attempts to date and place the author, and discusses the sources of the work.

Published under the auspices of the Center for Medieval and Renaissance Studies, UCLA.

200 pages, £5.55

University of California Press

2-4 Brook Street, London W1

The British Society for the History of Science

THE object of the Society is to further the study of the history of science by holding meetings for the reading and discussion of papers and by facilitating the publication of relevant material. *The British Journal for the History of Science* is published by the Society as its official organ.

There will generally be a summer meeting, a winter meeting, and an Easter meeting of the Society. Additional meetings are arranged for specific occasions such as important anniversaries.

Membership, which includes a subscription to *The British Journal for the History of Science*, is open to all persons approved by the Council of the Society and elected at an ordinary meeting. The annual subscription is £7.00 (\$21.00) or, for Students, £3.00 (\$9.00).

Membership: Applications for membership should be made on a form that is available from The Assistant Secretary, The British Society for the History of Science, 47 Belgrave Square, London SW1X 8QX.

THE BRITISH JOURNAL FOR THE HISTORY OF SCIENCE

THE *Journal* is published three times a year, in March, July, and November, and the three parts published in any one year constitute a volume.

Editorial matters: Papers for inclusion in the *Journal* should be submitted to the Hon. Editor, Dr Robert Fox, Department of History, University of Lancaster, Bailrigg, Lancaster LA1 4YG, from whom instructions may be obtained concerning the presentation and documentation of papers. All communications on editorial matters, and books for review, should be addressed to the Hon. Editor.

Advertising: Particulars about advertising in the *Journal* may be obtained from The Advertisement Manager, The Institute of Physics, 47 Belgrave Square, London SW1X 8QX (tel: 01-235-61111).

Orders and back issues: Orders for the *Journal* and inquiries about back issues should be addressed to Headley Brothers Ltd, Ashford, Kent TN24 8HH. Claims for missing copies should be made to Headley Brothers within six months of publication. The annual subscription for non-members is £10.00 (\$30.00).

© The British Society for the History of Science 1976.

The British Journal for the History of Science

March 1976

Volume IX Part 1 No. 31

K. THEODORE HOPPEN: The Early Royal Society. Part I	1-24
JOHN L. RUSSELL: Action and Reaction before Newton	25-38
WILLIAM H. BROCK and ROY MACLEOD: The 'Scientists' Declaration': Reflexions on Science and Belief in the Wake of <i>Essays and Reviews</i> , 1864-5	39-66
Book Reviews	67-86
Books Received	87-88
Notes on Contributors	89

Published by

The British Society for the History of Science

Registered Office: 47 Belgrave Square, London SW1X 8QX

Price: £3.50 or \$10.50 including postage
(Free to members of the Society)

Brit. J. Hist. Sci. 9 No. 31
Published March 1976