

Inspiring air

A history of air-related science

SERIES ON THE HISTORY OF SCIENCE

"This volume is a relevant scholarly achievement as it deals with instruments that were substantially neglected: eudiometers are instruments that most likely every chemist, and also quite a number of historians of science, have heard of and maybe even used. However, to most people, both the instrument and the related practice appear to be straightforward. As we learn from Grapí's analysis, this is not the case: there is a long and complex history behind these instruments. A substantial achievement lies in making the complexity of the contexts in gas research accessible – this was relevant in biological, medical, and chemical contexts and also affected natural philosophy. The broad use of primary sources (and here are also instruments that survived to be mentioned) as well as secondary sources results in a very dense and comprehensive volume. It should be stressed that the author develops a clear and accessible narration that is despite being dense still very accessible. The study is highly relevant to historians of science and of scientific experimentation. It may also be relevant to some scholars that focus on material culture studies."

Prof. Dr. Peter Heering,
Europa-Universität Flensburg, Germany

Summary

Eudiometers were instruments originally devised for checking the 'goodness' of common air. Seeking to be more than just a chronological inventory of eudiometers, this book presents a unique retrospective of these fascinating apparatuses from the end of the eighteenth century to the mid-nineteenth century.

By paying particular attention to the experimental procedures involved over the course of the test, this book aims to understand and explore how eudiometers function, to describe the materials used in making them and the different reagents employed in each eudiometrical test. Importantly, eudiometers were employed within a variety of spheres including human and animal health, gas analysis, chemical theory, plant and animal physiology, atmospheric composition, chemical compound composition, gas lighting, chemical revolution and experimental demonstration.

Finally, this book looks to redress the existing imbalance in the history of chemistry regarding the attention given to theoretical aspects of chemistry in comparison to chemical practice and apparatus. The few existing accounts of chemical devices written in the past century have not been

sufficiently helpful for the understanding of experimental practice in chemistry. Until now no work that deals exclusively with eudiometers and gas analysis from a historical standpoint has been published. Thus, this book will not only cast new light on the subject, but will also contribute to further research on the history of chemical instruments.



INSPIRING AIR
A history of air-related science

by Pere Grapí

About the author

Pere Grapí graduated in chemistry from the University of Barcelona in 1975. He later obtained a master's degree in the History of Science from the Autonomous University of Barcelona in 1990, before completing his PhD at the same university in 1996. Spending some periods working as an Associate Professor of the History of Science at the Autonomous University of Barcelona, he is now an independent scholar whose main research interests are focused on the history of chemistry during the late 18th and early 19th centuries, as well as on the relation between the history of science and teaching. Grapí is also an affiliated member of the Centre for the History of Science of the Autonomous University of Barcelona and member of the Council of the Catalan Chemical Society. The idea for this book came about when Grapí was working as an advisor for a research paper conducted by three of his final year high school students during the academic year of 2003-2004. Inspired by their research into making a replica of Volta's pile and reproducing some of the accompanying historical experiments, Grapí became increasingly interested in exploring the emergence of electricity in the practice of chemistry. He, therefore, felt obliged to familiarize himself with the contributions of prominent figures such as Volta and Priestley. Notably, both Volta and Priestley made important contributions to the development of eudiometers. Thus, quite unwittingly, it was those three former students who remade Volta's pile that motivated him to focus his attention on eudiometers rather than other chemical apparatuses. However, it wasn't until his retirement from science teaching in 2012 that he was able to dedicate the time required to complete this book.

July 2019 | Hardback 236x160mm | 380 Pages | ISBN: 978-1-62273-614-0
Also in Paperback (\$59/€50/£44) | ISBN: 978-1-62273-738-3

SUBJECTS Science, History of Science

VIEW/ORDER ONLINE AT vernonpress.com/book/657

 VERNON PRESS
SERIES ON THE HISTORY OF SCIENCE

\$ 69

€ 58

£ 52

12% DISCOUNT ONLINE
USE CODE AT CHECKOUT

FLYPR12



VERNON PRESS
www.vernonpress.com