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### Conversations on Chemistry

Jane Haldimand Marcet (1769–1858) was a pioneer in the field of education who wrote accessible introductory books on science and economics. Noting that women's education 'is seldom calculated to prepare their minds for abstract ideas', she resolved to write books that would inform, entertain and improve a generation of female readers. First published anonymously in 1805, her two-volume work *Conversations on Chemistry* swiftly became a standard primer, going through sixteen editions in England alone, and was cited by Michael Faraday as having greatly influenced him. Presented as a series of discussions between a fictional tutor, Mrs Bryan, and her two female students, the flighty Caroline and earnest Emily, *Conversations* combines entertaining banter with a clear and concise explanation of scientific theories. In Volume 1 the girls are introduced to 'Simple Bodies' through such colourful examples as hot air balloons and the spa waters of Harrogate. For more information on this author, see http://orlando.cambridge.org/public/svPeople?person_id=marcja

# Conversations on Chemistry

*In which the Elements of that Science are Familiarly Explained and Illustrated by Experiments*

Volume 1:
On Simple Bodies

Jane Haldimand Marcet

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# CONVERSATIONS

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IN TWO VOLUMES.

*The Fifth Edition, revised, corrrected, and considerably enlarged.*

VOL. I.

ON SIMPLE BODIES.

*LONDON:*
PRINTED FOR LONGMAN, HURST, REES, ORME, AND BROWN,
PATERNOSTER-ROW.
1817.

Printed by A. Strahan,
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# ADVERTISEMENT.

*THE Author, in this fifth edition, has endeavoured to give an account of the principal discoveries which have been made within the last four years in Chemical Science, and of the various important applications, such as the gas-lights, and the miner's-lamp, to which they have given rise. But in regard to doctrines or principles, the work has undergone no material alteration.*

*London, July,* 1817.

# PREFACE.

IN venturing to offer to the public, and more particularly to the female sex, an Introduction to Chemistry, the author, herself a woman, conceives that some explanation may be required; and she feels it the more necessary to apologise for the present undertaking, as her knowledge of the subject is but recent, and as she can have no real claims to the title of chemist.

On attending for the first time experimental lectures, the author found it almost impossible to derive any clear or satisfactory information from the rapid demonstrations which are usually, and perhaps necessarily, crowded into popular courses of this kind. But frequent opportunities having

afterwards occurred of conversing with a friend on the subject of chemistry, and of repeating a variety of experiments, she became better acquainted with the principles of that science, and began to feel highly interested in its pursuit. It was then that she perceived, in attending the excellent lectures delivered at the Royal Institution, by the present Professor of Chemistry, the great advantage which her previous knowledge of the subject, slight as it was, gave her over others who had not enjoyed the same means of private instruction. Every fact or experiment attracted her attention, and served to explain some theory to which she was not a total stranger; and she had the gratification to find that the numerous and elegant illustrations, for which that school is so much distinguished, seldom failed to produce on her mind the effect for which they were intended.

Hence it was natural to infer, that familiar conversation was, in studies of this kind, a most useful auxiliary source of in-

formation; and more especially to the female sex, whose education is seldom calculated to prepare their minds for abstract ideas, or scientific language.

As, however, there are but few women who have access to this mode of instruction; and as the author was not acquainted with any book that could prove a substitute for it, she thought that it might be useful for beginners, as well as satisfactory to herself, to trace the steps by which she had acquired her little stock of chemical knowledge, and to record, in the form of dialogue, those ideas which she had first derived from conversation.

But to do this with sufficient method, and to fix upon a mode of arrangement, was an object of some difficulty. After much hesitation, and a degree of embarrassment, which, probably, the most competent chemical writers have often felt in common with the most superficial, a mode of division was adopted, which, though the most natural, does not always admit of be-

ing strictly pursued — it is that of treating first of the simplest bodies, and then gradually rising to the most intricate compounds.

It is not the author's intention to enter into a minute vindication of this plan. But whatever may be its advantages or inconveniences, the method adopted in this work is such, that a young pupil, who should occasionally recur to it, with a view to procure information on particular subjects, might often find it obscure or unintelligible; for its various parts are so connected with each other as to form an uninterrupted chain of facts and reasonings, which will appear sufficiently clear and consistent to those only who may have patience to go through the whole work, or have previously devoted some attention to the subject.

It will, no doubt, be observed, that in the course of these Conversations, remarks are often introduced, which appear much too acute for the young pupils, by whom

they are supposed to be made. Of this fault the author is fully aware. But, in order to avoid it, it would have been necessary either to omit a variety of useful illustrations, or to submit to such minute explanations and frequent repetitions, as would have rendered the work tedious, and therefore less suited to its intended purpose.

In writing these pages, the author was more than once checked in her progress by the apprehension that such an attempt might be considered by some, either as unsuited to the ordinary pursuits of her sex, or ill-justified by her own recent and imperfect knowledge of the subject. But, on the one hand, she felt encouraged by the establishment of those public institutions, open to both sexes, for the dissemination of philosophical knowledge, which clearly prove that the general opinion no longer excludes women from an acquaintance with the elements of science; and, on the other, she flattered herself that whilst the impressions made upon her mind, by the wonders

of Nature, studied in this new point of view, were still fresh and strong, she might perhaps succeed the better in communicating to others the sentiments she herself experienced.

The reader will soon perceive, in perusing this work, that he is often supposed to have previously acquired some slight knowledge of natural philosophy, a circumstance, indeed, which appears very desirable. The author's original intention was to commence this work by a small tract, explaining, on a plan analogous to this, the most essential rudiments of that science. This idea she has since abandoned; but the manuscript was ready, and might, perhaps, have been printed at some future period, had not an elementary work of a similar description, under the title of "Scientific Dialogues," been pointed out to her, which, on a rapid perusal, she thought very ingenious, and well calculated to answer its intended object.

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OF

# *THE FIRST VOLUME.*

## ON SIMPLE BODIES.

### CONVERSATION I.



### CONVERSATION II.

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ERRATA.

Vol. I. page 56. last line but one, for "caloric," read "calorific."
179. Note, for "Plate XII." r. "Plate XIII."