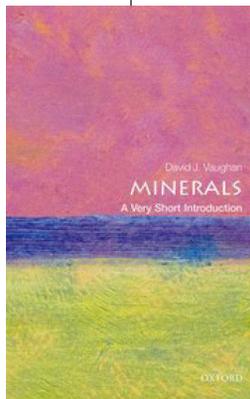


**MINERALS: A VERY SHORT INTRODUCTION**

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*Minerals: A Very Short Introduction* by David J. Vaughan is one of a series of over 400 volumes of “very short introductions” on a large variety of topics published by Oxford University Press. Begun in 1995, the volumes are meant to have an expert author present an introduction to a topic “for anyone wanting a stimulating and accessible way into a new subject”. This book certainly hits that mark and is a very effective introduction to mineralogy; indeed, the book should be required reading for the lay public and, particularly, for scientists outside of the broad discipline of mineralogy.

Most Earth scientists have taken one or more courses in mineralogy or Earth materials, often using a textbook that contains much more material than can be consumed in a semester. The book commonly sits on the professional’s shelf throughout her or his career, hopefully often consulted, but is undoubtedly never fully consumed. But if one could extract the main concepts of those books, and add modern, salient features of mineralogy that are relevant to society, then the current book would be the result. Clearly, “a very short introduction” cannot, nor should not, cover any portion of the discipline in depth. Vaughan’s book is very effective at covering a breadth of subjects, from the study of minerals (including brief summaries of the electron microprobe, synchrotron radiation, optical mineralogy, and X-ray diffractometry), minerals at the Earth’s surface and in the Earth’s interior (including a short introduction to high-pressure experiments), nanominerals and nanomaterials, and biomineralization (“Minerals and the Living World”). In addition to these “expected” topics, the book introduces



several topics that link minerals to society in a chapter entitled “Minerals as Resources”: these topics effectively illustrate the essential role that minerals play in the evolution of society. The book ends with a very timely chapter on mineral evolution, illustrating the work of Robert (Bob) Hazen (Carnegie Institution of Washington, USA) and colleagues in this arena, thus affording the reader an introduction to the latest research thrusts in the discipline.

Each spring, I teach an advanced course in crystal chemistry that is populated with students from around campus. These students come from the departments of physics, chemistry, or materials science and are, thus, well-prepared for work in crystal structure determination. But they are not cognizant of many aspects of how nature arranges matter on Earth: to those students, the stockroom is the source of all matter. This book will be an ideal very short introduction to mineralogy for such students, and next year I will definitely buy a copy for each of them. The introduction to mineralogy afforded by this book will enrich all class discussions and put all students on equal footing. The information contained in this compact book encompasses all that one would hope that a science student in a discipline outside of geology would know. David Vaughan’s final statement in the book emphasizes the importance of the material, “... regarding the practical applications of our knowledge of minerals and of Earth Systems, the health and well-being of humankind are linked to minerals as both sources of essential nutrients or as potential poisons, and as the providers of the raw materials which are vital for our survival... Truly it can be said that ‘minerals matter’.”

**John M. Hughes**

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1 Vaughan DJ (2015) *Minerals: A Very Short Introduction*. Oxford University Press, 137 pp ISBN: 978-0-199-682843, RRP £7.99 or US\$ 11.95



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