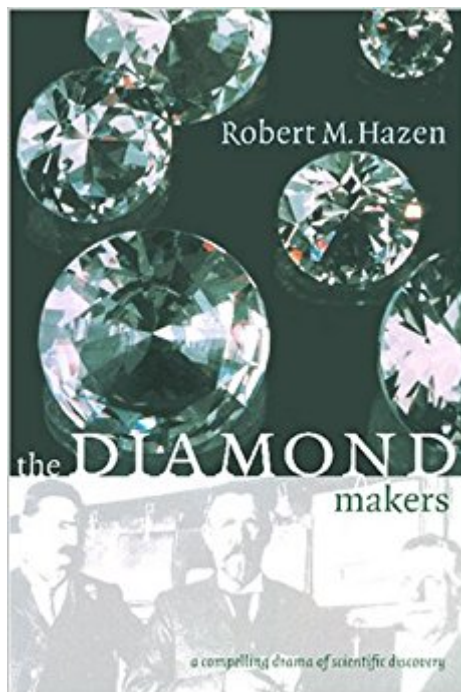


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# The Diamond Makers



## Synopsis

Since time immemorial, we have treasured diamonds for their exquisite beauty and unrivaled hardness. Yet, most of the earth's diamonds lie deep underground and totally inaccessible to us--if only we knew how to fabricate them! In *The Diamond Makers* Robert Hazen vividly recounts the very human desire to exceed nature and create a synthetic diamond. Spanning centuries of ground-breaking science, instances of bitter rivalry, cases of outright fraud and self-delusion, Hazen blends drama and science to reveal the extraordinary technological advances and devastating failures of the diamond industry. Along the way, readers will be introduced to the brilliant, often eccentric and controversial, pioneers of high-pressure research who have harnessed crushing pressures and scorching temperatures to transform almost any carbon-rich material, from road tar to peanut butter, into the most prized of all gems. Robert M. Hazen is the author of fifteen books, including the bestseller, *Science Matters: Achieving Scientific Literacy*, which he wrote with James Trefil. Dr. Hazen has won numerous awards for his research and scientific writing.

## Book Information

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## Customer Reviews

"Utterly absorbing...Hazen makes the story profoundly exciting, conveying the scientific passion of the researchers....It's a gem." *The Washington Post*"Glittering prize....Read it and spread the word." *New Scientist*"Hazen tells the very interesting and gripping story of the manufacture of artificial diamonds in this fine book." *Choice*"...illustrate[s] some of the best attributes of science writing..." *Bloomsbury Review*"...a first-class, fascinatingly well written history of the exciting developments

that led to the creation of diamonds even from peanut butter." Science Books & Films"Robert Hazen's *The Diamond Makers* is a compelling, nontechnical narrative covering centuries of history related to diamond, centered mostly around brilliant, often eccentric and controversial pioneers of research at high pressures...*The Diamond Makers* is the first major publication to cover the whole period from the human point of view, while maintaining scientific integrity...Hazen gives a thorough and exciting account of the history of diamonds and the efforts to synthesize them...As one of the surviving diamond-makers, I am able to vouch for the thorough and open-minded interviews Hazen conducted." *Physics Today*"this book will appeal to the interested layperson...It was immensely satisfying to be able to put their entire story on context and have it come alive through Hazen's book." *American Mineralogist*"There is virtually no way that *The Diamond Makers* could miss being an excellent work of great interest to geologists, mineralogists, gemologists, and science historians as well as the layman who enjoys a good read...a fascinating book...The story of diamond synthesis research is so excitingly told that any lay-person, even relatively young ones, would have a hard time putting it down once started and by the time he or she gets to the last page they will have painlessly picked up a lot of science and, most important, have come to realize that science can be pretty exciting stuff." *Earth Sciences History*

Humans have treasured diamonds for their exquisite beauty and unrivaled hardness for thousands of years. Spanning centuries of ground-breaking science, bitter rivalry, outright fraud, and self-delusion, *The Diamond Makers* is a compelling narrative centered around the brilliant, often eccentric, and controversial pioneers of high pressure research. This vivid blend of dramatic personal stories and extraordinary scientific advances--and devastating failures--brings alive the quest to create the most prized of gems.

This book is easy to read, nicely paced and chock full of interesting facts about the human challenges overcome by the scientists and engineers who ultimately solved the problem of making artificial diamonds.

A book about the quest to make diamonds by brute force. It was a long hard struggle to heat and mash carbon enough to manufacture diamonds cheap enough to use in industrial applications. Eventually it became so routine that even peanut butter was converted to diamond.

Fascinating story about the pioneering work in mineral and rock mechanics and the quest for man

made diamonds. Interesting science read.

The Diamond Makers by Robert Hazen uncovers the technological genius behind many chemists and physicists who were successful in the early synthetic manufacturing of the world's most popular stone.

This is an absolutely riveting book documenting the science and the people behind the centuries-old pursuit to make the first synthetic diamonds, as well as the new science of ultra-high-pressure that was developed along the way. You'll learn how peanut butter can be made into diamonds, how bombs are exploded underground to make ultra-fine diamond crystals, and how the highest pressures ever obtained by science are done with an apparatus that can fit in the palm of your hand. An absolute must for students of science and technology.

People have been fascinated by diamonds for centuries, and scientists tried for about a century to produce them in a laboratory for about a century before they succeeded in a General Electric lab in 1954. This is the story of that quest. It is told with a liveliness and thoroughness quite unusual and delightful. Hazen describes the failed attempts of the early researchers, in some detail, and shows how one of the legends taught to me long ago as a child are bogus. Moissan could not have produced diamonds by the method he described. The story of Charles Parsons' (the inventor of the steam turbine) attempts was new to me and made me respect him all the more. Thirty years of failed attempts by one of the foremost mechanics of the early twentieth century showed the world just how challenging the synthesis was. Hazen gives a lively account of Percy Bridgeman's exploits in opening up the whole field of high pressure research to systematic study. His clever double-piston apparatus is clearly described, and I was entertained to learn how he published a couple of papers on how to measure pressure in it without divulging its geometry. The final breakthrough by Hall and coworkers at GE is described in some detail, and the controversy over credits and rewards is laid out for all it is worth. The personalities and their foibles and eccentricities of giants are always quite something. I hugely enjoyed this, and wound up sympathizing with Hall. Then Hazen goes into the modern developments of the scale-up to a quite profitable business, which is very impressive stuff. This is all still developing and changing decades later, and Hazen even includes some well-informed speculation on the importance of the newer vapor phase processes as well. I really enjoyed the fact that the book included lots of pictures and diagrams of the apparatus. Adds a lot. This is thrilling science and you'd have to be quite the cynic to think otherwise.

The transducer using electronics and derivatives. Now in this world we are surrounded of transducer and well known programmers to make the best and quality good. And the tester scientist formed of technicians who knows all about high internal pressure. I read about this book about references and I like it. If you want to follow the pressure content and derivatives. Now days the competency does not let you know about the formula or process to make a good that is why you have to do a research about your concerns and develop the understanding of the unknown....

In this book Mr. Hazen presents a comprehensive, interesting, and fair history of the development of synthetic diamond. His treatment of some of the controversial historic elements is even-handed and accurate and he presents complex scientific information in a way that is easy to understand. This book is a must read for anyone interested in high pressure research and a you'll-be-glad-you-did for anyone interested in science at all.

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