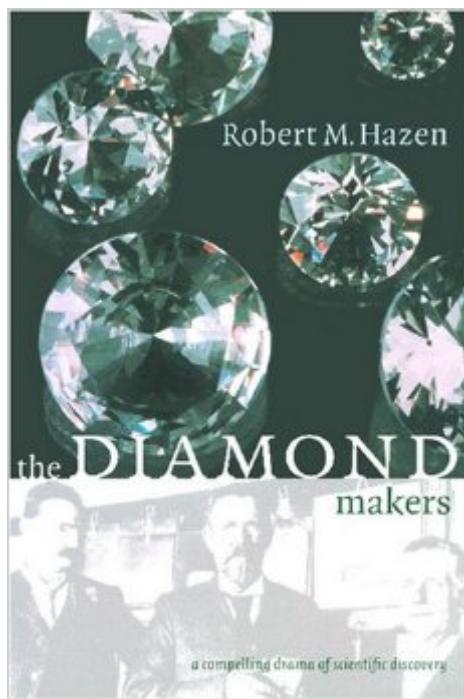


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The Diamond Makers



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 unaccessible 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

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.

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.

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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