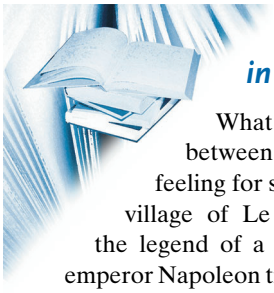

The Last Alchemist in Paris

What is the connection between Miss Smilla and her feeling for snow and the picturesque village of Le Baux-des-Provence? Is the legend of a button-less army of the emperor Napoleon truly a consequence of the interconversion of tin allotropes? Or, what makes a diamond engagement ring, which in fact is not a real diamond ring, interfere with US nuclear submarines? These and many more connections are revealed in Lars Öhrströms book The Last Alchemist in Paris. The Swedish professor of inorganic chemistry puts scientific discoveries and inventions in a historical context. He devotes each of the 22 chapters to a chemical element or element group. For example, the chapter "From Bitterfeld with Love" starts with the story of Henry Lowenhaupt performing an experiment which, of course, no chemist would do in real life: He throws a piece of calcium into a river and watches the spectacular reaction. This is the starter to introduce the reader to the beginnings of the Russian nuclear program and the related espionage activities of the CIA and MI6. This story is used to convey information about the chemistry of uranium, the reduction of uranium fluoride by calcium metal, and the problems caused by its contamination with the boron isotope ^{10}B. That combination of different but interconnected events allows Lars Öhrström to explain to the interested reader some fundamental chemical knowledge such as the use of chemical equations, redox reactions, and the basics of atomic structure.

In a similar way, the author introduces a story about a dog in the freight room of the airship Hindenburg. He links the well-known Hindenburg tragedy and other airship accidents to the history of the availability of the noble gas helium, and explains why hydrogen gas was used instead for filling airship balloons. Political aspects of the often cited helium embargo are discussed. The chapter ends with a warning not to waste helium by using it for kids' balloons.

The book under review is, of course, not a textbook but an entertaining storybook: anecdotes, historical facts, and a side-long glance into great literature help to put scientific discoveries into the proper context and to explain the basics of chemistry in an unconventional manner to a broad readership.

At first sight, it appears that the author tends to jump from detail to detail, without giving any connections directly. This seems to be confusing, but later in each chapter Lars Öhrström reveals all that. This is the case for the section on copper, for example, which starts with the execution of Swedish miners in the 18th century, then suddenly switches to the deaths of president Salvador Allende and of the UN diplomat Dag Hammarskjöld. And, to Öhrström's great regret, the synthesis of testosterone has nothing to do with copper!

Thus, the book is certainly worth reading. And even admirers of colorful pigments will find interesting information. We get to know about the "Lion of Panjshir" and about a prisoner in a crystal cage. The former was killed, and the latter is responsible for the beautiful color of Lapis lazuli and the pigment ultramarine. We are told what is so special about the mine in north-eastern Afghanistan, and how structure and properties are connected. The author also gives a rudimentary explanation of how chemists gain information about structures.

By now, of course, the reader will have recognized from the name of the village that Miss Smilla and Les Baux are connected by the technical Hall–Héroult electrolytic process for the production of aluminum using cryolite. Bauxite is the most important source of aluminum, and in the well-known novel Miss Smilla investigates the death of a child in Greenland, where deposits of cryolite were first discovered.

All in all, this book can be recommended as a worthwhile read for everyone interested in science, and they might be inspired to make use of a real textbook to learn more about chemistry. I am sure that one episode or other of this book will appear in school or college seminars.

The question remains: who is the *Last Alchemist in Paris*? Here I refer you to Lars Öhrström's book, mentioning only that Nicolas Flamel, the character who dies in one of the Harry Potter stories, is not the one!

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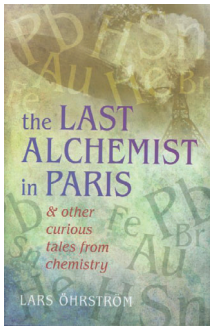

The Last Alchemist in Paris & other curious tales from chemistry. By Lars Öhrström. Oxford University Press, Oxford, 2013. 272 pp., hardcover, £16.99.—ISBN 978-0199661091