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Prologue to The Chemical Adventures of Sherlock Holmes

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Today Sherlock Holmes books include numerous compilations of the original stories, new stories using the Watson and Holmes characters, and books discussing aspects of Holmes, including *The Sherlock Holmes Companion: An Elementary Guide* by Daniel Smith (1), *The Science of Sherlock Holmes: From Baskerville Hall to the Valley of Fear, the Real Forensics behind the Great Detective's Greatest Cases* by E. J. Wagner (2), *The Sherlock Holmes Handbook: The Methods and Mysteries of the World's Greatest Detective* by Ransom Riggs (3), and even *Sherlock Holmes for Dummies* by Steven Doyle and David A. Crowder (4). There is an abiding interest in the Sherlock Holmes canon and the Holmes methods of deduction and rational inquiry. These methods of asking questions and obtaining answers (however surprising) are something for which men and women of science, including chemists, perhaps have a natural affinity. Thus, there has been an interest in our Chemical Adventures of Sherlock Holmes stories since the first was published in 1989 (5) (a little more than 100 years after Sir Arthur Conan Doyle created the beloved characters of Sherlock Holmes and Dr. Watson).

One of us ought to admit to conceiving the first Chemical Adventures of Sherlock Holmes, and, indeed, he (T.G.W.) makes this confession now. How did he get the idea to write the first Adventure? Unfortunately, the actual event is obscured by the years that have passed since this "good idea" emerged. However, there are some lingering clues to provide insight to the mystery of who and why. This author had already published "Legendary Chemical Aphrodisiacs" (1980, see ref 6) and "Chemistry in *Moby Dick*" (1986, see ref 7) in the *Journal of Chemical Education*. So we see a significant interest in chemistry, literature, and human nature. Given knowledge of chemistry and a long-standing love of Doyle's Holmes, the "good idea" somehow formed itself in the author's brain.

The first article in 1989, "Sherlock Holmes and the Yellow Prisms" (5) was met with interest in that we actually received requests for reprints—quite a lot of them! The 15-year series began with one story and the subsequent desire to create another and then another.... And when our series stopped (15 seemed like a sufficient number to us and not wanting to push a good thing beyond its natural limits), Ken Shaw liked the style enough to create two more stories. Figure 1 shows an image of Sherlock Holmes at work that has come to be associated with this series in the *Journal of Chemical Education*.

The Yellow Prisms story involved a poisoning, a logical and easy theme for a first chemistry and crime adventure. There have been a few other poisonings along the way, but we have tried to

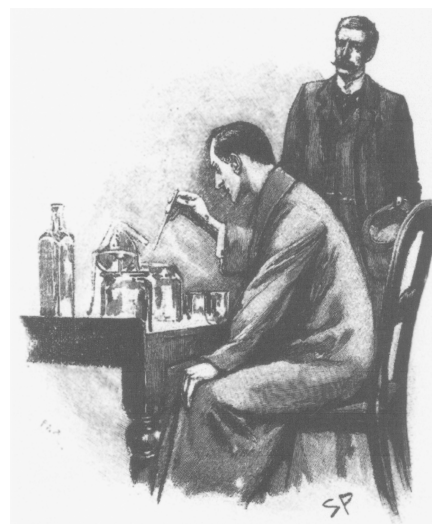


Figure 1. Illustration of Sherlock Holmes and Dr. Watson by Sidney Paget for an 1892 edition of the *Strand Magazine* featuring Arthur Conan Doyle's story, "The Naval Treaty". See Lucy, C. A. *J. Chem. Educ.* 2000, 77, 459–470; DOI: 10.1021/ed077p459.

introduce many different kinds of crime involving a wide variety of areas of chemistry. There have been stories of scientific fraud, environmental pollution, student cheating, a sealed-room murder (of course), arson, vandalism, art forgery, a prison escape, and even a Christmas story. The collection of stories contains aspects of the major disciplines of chemistry and important ideas regarding the rational application of science to problem solving.

Some first drafts were written by one of us and some by the other. Rybolt focused on inserting more chemistry and providing historical references in Waddell's first drafts. Waddell labored to create the old London atmosphere, the Doyle language, and literary reflections. Each story went through many drafts as both of us hashed out the details and each story evolved gradually to the final submission form.

There is little doubt that teachers and students use and enjoy these articles. We would often hear from high school teachers who wanted reprints, or from students who had been assigned one of the mysteries and pleaded innocently for us to reveal the solution. A high school chemistry textbook presented a shortened version of "The Hound of Henry Armitage" (8). Surprisingly, one Chemical Adventure was used as a cumulative exam

question for Ph.D. students in graduate school. The stories have been used as a focus for a Freshmen Learning Group dealing with forensics at another university. Closer to home, Rybolt assigned "The Case of Three" (9) for his university-level Honors General Chemistry students to ponder and solve.

As the articles were published (and at a time when reprints were a little more common), we received requests for them from various countries around the world: Argentina, Belgium, Cuba, Czech Republic, France, Hungary, India, Italy, Mexico, the Philippines, Poland, Slovakia, Switzerland, and the United States. The fact that we received requests from Czechoslovakia and subsequently from the offspring nation states of both the Czech Republic and Slovakia (Slovak Republic) is an indication that the Holmes and Watson characters may be more enduring even than national boundaries.

And with no one more surprised and delighted than us, individual stories and in some cases the entire collection of stories variously have been translated and published in other languages, such as Chinese, French, Greek, Italian, and Russian. The Chinese translations of the stories were made by Zongling Che and published in a Chinese magazine called *Science Pictorial*. Perhaps most remarkable was the observation made by one Rybolt's former undergraduate research students who had received a B.A. in chemistry along with degrees in economics and accounting and a subsequent Masters in Finance. Xike (Richard) Zhang was back in his home city of Shanghai as an employee of an international consulting company, when he sent an e-mail that simply said, "By the way, the other day I saw a kid in Shanghai reading one of your Sherlock Holmes Stories." Although there are around 20 million people in Shanghai, that a former student would happen to see one of them reading the Chinese version of one of our stories surely shows that real life can sometimes be as fantastic as fiction!

One might notice that the earlier Adventures were shorter than the later ones. This change was in response to reviewers' suggestions for enriching the content. Most reviewers have been very enthusiastic about our Chemical Adventures and we are grateful to all of them. One particular reviewer has kept reappearing in recent years as a pointed but faithful critic, sometimes writing pages of single-spaced analysis. Our stories have been improved by the work of this individual and all other reviewers.

Finally, we thank the current and former editors (Norbert Pienta, John W. Moore, and J. J. Lagowski) and associate editors and the staff at the *Journal of Chemical Education*, especially associate editor Erica Jacobsen, for their expert help and encouragement over many years and many stories. We are especially grateful to the teachers and students in many parts of the world who liked our stories and who have expressed a need for reprints and collection of all the stories. Finally, we express our gratitude to Sir Arthur Conan Doyle for creating the immortal characters of Sherlock Holmes and Dr. Watson and for writing the first of his many Holmes tales, "A Study in Scarlet" (10) in 1887. We hope you enjoy this collection of the chemical and scientific adventures of Sherlock Holmes, the world's greatest consulting detective.

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