handbook is not only a consequence of the natural increase in knowledge over 50 years, but also of the development of new scientific instrumentation, experimental techniques, computational tools and methods, and modern facilities.

Because the science and technology of plutonium requires an interdisciplinary approach, the need for a single reference is as important today as it was 50 years ago.

An innovative addition to the handbook is the introduction of an entire volume devoted to laboratory techniques for the safe handling of highly radioactive and toxic materials—such as encapsulation, micro samples, and remote handling—so that they can be studied by modern instrumentation. This is an entirely new construct that we included in order to provide practical guidance on methodologies for working with plutonium and other radioactive materials safely.

Geeson: Because the science and technology of plutonium requires an interdisciplinary approach, the need for a single reference is as important today as it was 50 years ago. Our goal for the new handbook is to provide a modern comprehensive archival resource for anyone working with plutonium, whether students entering the field, seasoned professionals conducting fundamental research, or managers with oversight of activities involving plutonium. It should also serve a broader scientific audience that is interested in new phenomena in physics, chemistry, and metallurgy into which the study of plutonium provides important insights.

Who are the key players behind creating the handbook?

Clark: We assembled a project management team of five key players, and we managed the project out of Los Alamos. This included the technical editors—David, Robert, and me—along with project manager Patrice Stevens [LANL] and managing editor Natanya Civjan [LANL]. We received tremendous support from LANL, AWE, and NNSA managers, along with illustration, editorial, and project management support from Los Alamos.

What were some highs and lows of putting the project together?

Hanrahan: The core team of five held monthly conference calls and in-person meetings over nine years. This project developed lasting professional relationships and personal friendships around the world. We took advantage of the Plutonium Futures Conferences as a means to meet face-to-face with our international cast of authors. The Plutonium Futures Conference series facilitated author meetings in Cambridge in 2012, Las Vegas in 2014, Karlsruhe in 2016, and San Diego in 2018. There were many challenges in keeping more than 200 authors on track, and in some cases we had to make late substitutions to get to a final product. Our greatest disappointment is the lack of authorship from Russia.

Will there be another edition down the line?

Geeson: We sincerely hope to see an electronic version of the handbook come to fruition in the future. There will always be opportunities to add new topics as our understanding of this exotic material continues to grow. We look forward to keeping this material up to date, perhaps through Web resources, but another complete revision may well be a job for the next generation. NN