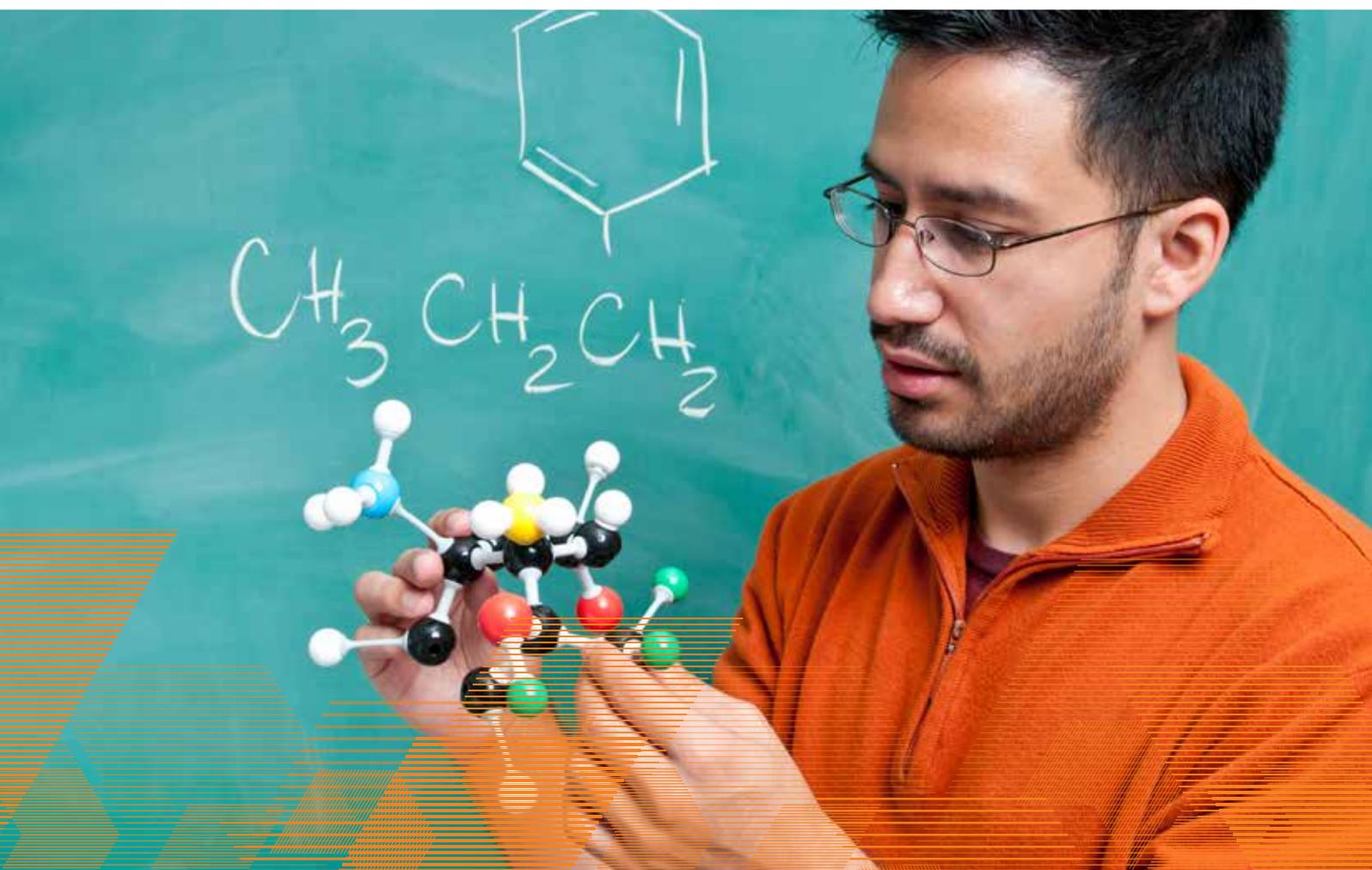


CASE STUDY

Knovel[®]

University at Buffalo

Reliable information to fuel quality research



SUMMARY

For the University at Buffalo, Knovel is a comprehensive and quality interactive resource for technical insights and properties data that aids in education and research goals.

“Knovel’s online technical resources are the first place we look”

— A. BEN WAGNER, University at Buffalo



NANCY SCHILLER is Engineering Librarian at the University at Buffalo, where she assists students and faculty in the School of Engineering & Applied Sciences with their information needs. In addition, she is Co-Director of the National Center for Case Study Teaching in Science, an NSF-funded project to transform undergraduate education in the sciences through active learning. In 1997, she was recognized with the SUNY Chancellor’s Award for Excellence in Librarianship. She edited a collection of cases designed to improve students’ critical thinking skills titled *Science Stories: Using Case Studies to Teach Critical Thinking* (NSTA Press, 2012). Her MS in Library Science is from Columbia University.

With nearly 60 years of experience between them, University at Buffalo science and engineering librarians A. Ben Wagner and Nancy Schiller understand how essential reliable information is to quality research. They also know how challenging finding that data has become since the rise in use of search engines like Google.

Although the internet has made information substantially more available to today’s students, the validity and usefulness of those sources is often questionable. This adds an extra challenge for today’s librarians as they train students to be more effective researchers: Not only do students have to learn how to search for data, they have to become more discerning about that data as well.

So where do Wagner and Schiller teach library patrons to begin their data searches? Knovel. Knovel’s online technical resources “are the first place we look,” says Wagner, “and we let students and faculty know that.”

As liaison to the Chemistry and Physics departments, Wagner is responsible for making sure that everyone—from undergraduates all the way up to senior faculty—has every piece of information they need. More importantly, he and the staff need to make sure that information is reliable and thoroughly authenticated. And it doesn’t hurt if it’s easy to find.

“It’s fine to have a tool that gets you 10 million hits,” exclaims the tenured librarian, “but at times you want precision. And one of the things that I can certainly compliment Knovel on is that it is very precise, particularly in data searching, where it goes down to the cell level in a table.”

Multi-million dollar decisions depend on good research

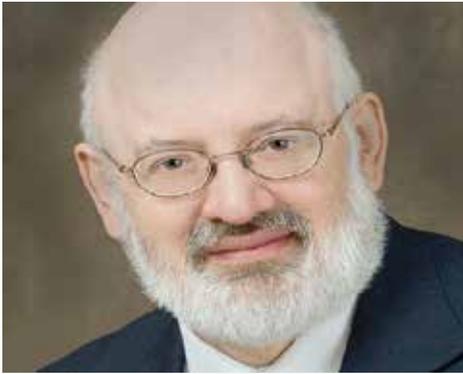
Wagner developed much of his research expertise in his 26 years as a researcher at the Occidental Chemical Corporation, where he spent forty to sixty percent of his time “pounding away at databases.” “Some

of the searching we did,” he says, “was the basis for multi-million dollar decisions, so a lot of attention was paid to really knowing the system and making sure you were complete and comprehensive.” Quality sources have always been very important, and comprehensiveness is one of the main reasons Wagner likes Knovel.

Property data resource

He also values Knovel’s balance between offering great background information as well as deeply specific technical content, which is why he promotes Knovel to faculty as well as students. The librarian recalls one professor who was trying to find solvents with a certain melting point range and other specific physical properties. As Wagner describes it, the faculty member “was very surprised to learn that one can do a search in Knovel by just porting in property data without first specifying the nature of the materials. [He] was very pleased that I was able to identify 4 or 5 solvents.”

University at Buffalo Engineering librarian Nancy Schiller concurs. “One of the most difficult problems is to find particular properties data. The fact that one of the initial focuses of Knovel was to bring these great sources of properties data online was amazing to me, and the data search makes it so much easier. It used to be that students had to have an idea about the material they were going to use and then see if that material could perform the way they wanted it to within a range of parameters. Knovel’s data search allows you to just set those parameters and see what material would work for you without knowing what the material may be. I call it a reverse material properties look-up.”



A. BEN WAGNER joined the faculty of the University at Buffalo (UB) Libraries in 2001 as the subject specialist in chemistry and physics. Prior to his UB position, Ben had a 26-year career in industry as a chemical librarian. Ben received his bachelor's in Chemistry from Bloomsburg University and his master's in Library & Information Science from Drexel University.

Wagner, Schiller and their fellow research specialists are particularly grateful for the fact that Knovel represents multiple publishers, which makes it more of a “one-stop-shop.” In addition, the chemistry and physics liaison appreciates Knovel’s keyword searching, relevance ranking and the clear, keyword-weighted results. Moreover, Wagner relates that many of his research colleagues are “quite excited” about Knovel’s interactive charts and graphs. Overall, what it says about Knovel is, “There’s very little I don’t like.”

Of course, giving students access to a comprehensive technical resource like Knovel is only half the battle. “Another one of the big challenges,” according to Schiller, “is how to reach the students.” And Schiller and the rest of the library staff have risen to that challenge.

For a start, University at Buffalo librarians, and Schiller in particular, have become a lot more active in promoting the university’s research collection, with the emphasis on active. In fact, the reference department at Schiller’s main engineering library doesn’t even have a seated area for librarians anymore. Instead, the staff are on call, moving about the building, answering questions and helping patrons make the most of library resources. The librarians also venture outside the library walls to support the community, with numerous staff members acting as in-house “embedded librarians” with regular office hours in the departments they serve.

Introducing students and faculty to research solutions

Two additional outreach practices UB librarians employ include (1) individual meetings with new faculty members and research teams to keep them—and their students—apprised about the university’s research tools and (2) assigning a “personal librarian” to particular groups of students to introduce them to the library’s resources. And for Schiller’s engineering students that includes Knovel. “Actually,” she says, “the first

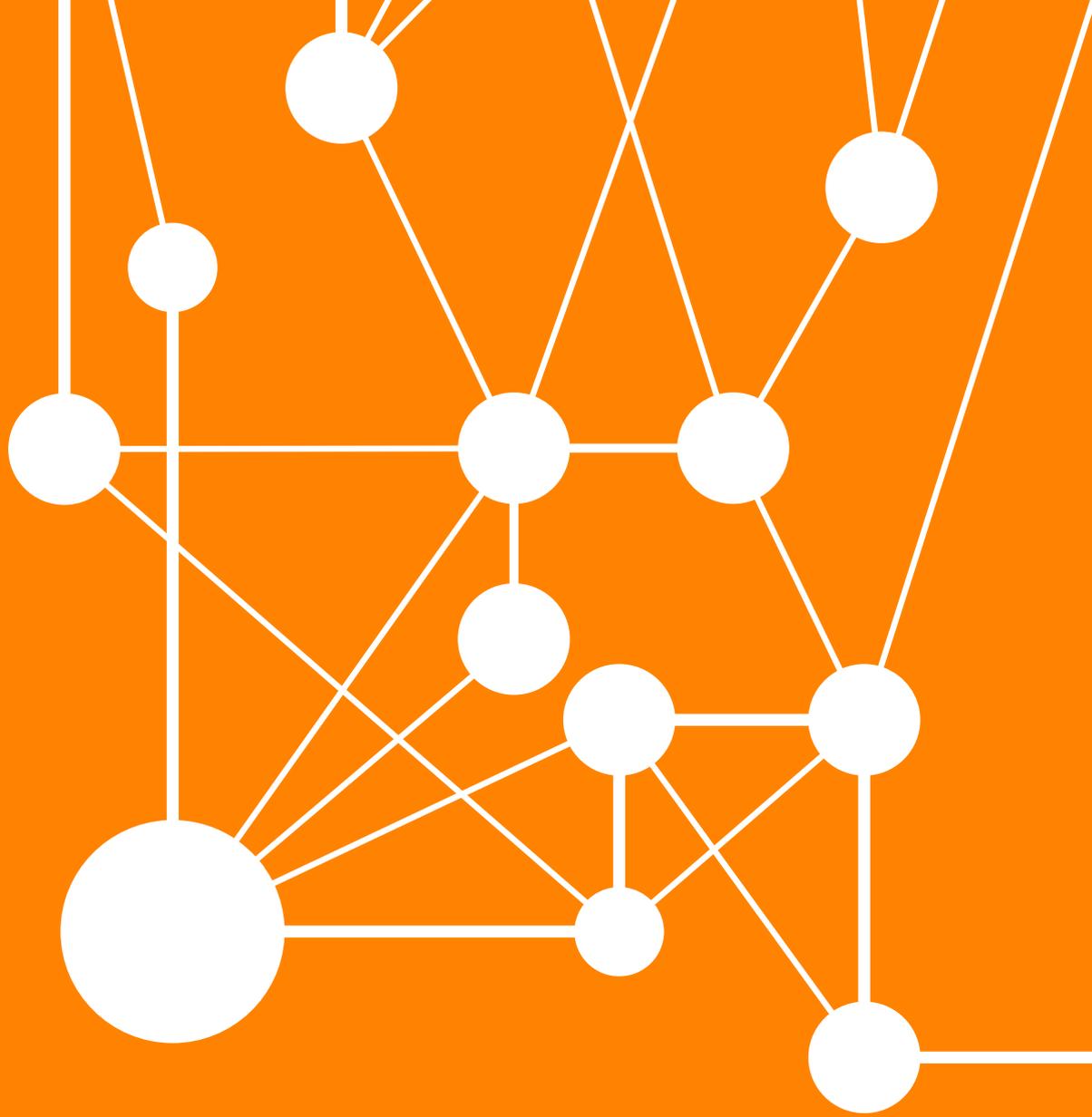
engineering-related resource I introduced that group to was Knovel.” The Academic Challenge is another exciting way Schiller convinces University at Buffalo students of Knovel’s research value. In this annual competition, science and engineering students from around the world compete for prizes like iPads and streaming media players by using Knovel to solve multiple technical questions. “We’ve certainly enjoyed it,” Schiller says, and with several of her students among the past winners—including the 2011 grand prize winner—and 350 UB students participating in the 2012 challenge from day one, it’s easy to see what she means.

The ultimate interactive reference

The reason Schiller promotes Knovel as much as she does is that “Knovel really works like a database. And when I say that,” she continues, “I mean that it has so much functionality. A lot of research platforms are pretty one dimensional, the way that they’re set up. But Knovel is not just a flat eBook platform for the delivery of the text. It operates more like a utility, with productivity tools and software programs running inside. That’s important for me,” she concludes.

A. Ben Wagner goes a step further. “We find the Knovel platform just about the best out there for e-reference,” he says. “I can’t imagine living without Knovel in answering reference questions.”

By helping students answer those questions, Wagner, Schiller and their colleagues are preparing them for successful careers inside and outside of academia. As Wagner himself stated, reliable and effective research forms the basis for multi-million dollar decisions and real scientific advances. The ability to undertake that research has never been more important or harder to find. That’s why the work being done by the University at Buffalo’s librarians is so important. It’s also why Knovel is proud to be a part of it.



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