



# Upon the Shoulders of Giants

By Greg Olgers '87

From little acorns, mighty science programs grow.

Facing each other across Van Andel Plaza, the A. Paul Schaap Science Center and VanderWerf Hall define the western edge of campus just as they host a defining part of the Hope experience for hundreds of students each year.

Home to the natural and applied sciences as well as the department of psychology, the two buildings reflect and support a program and teaching model that is acclaimed nationally and for decades has produced graduates who have in turn made a profound difference in the sciences themselves as researchers, teachers and physicians.

It happens, though, that the grand, brick-and-mortar buildings are descendents of far humbler stock. Their lineage traces back to a 10-year-old wooden storehouse, built just



Dedicated in 1903, Van Raalte Hall was the first building at Hope constructed specifically with science education in mind. The tradition of providing facilities that well support learning continues—and was realized most recently with the opening of the Schaap Science Center in 2003.

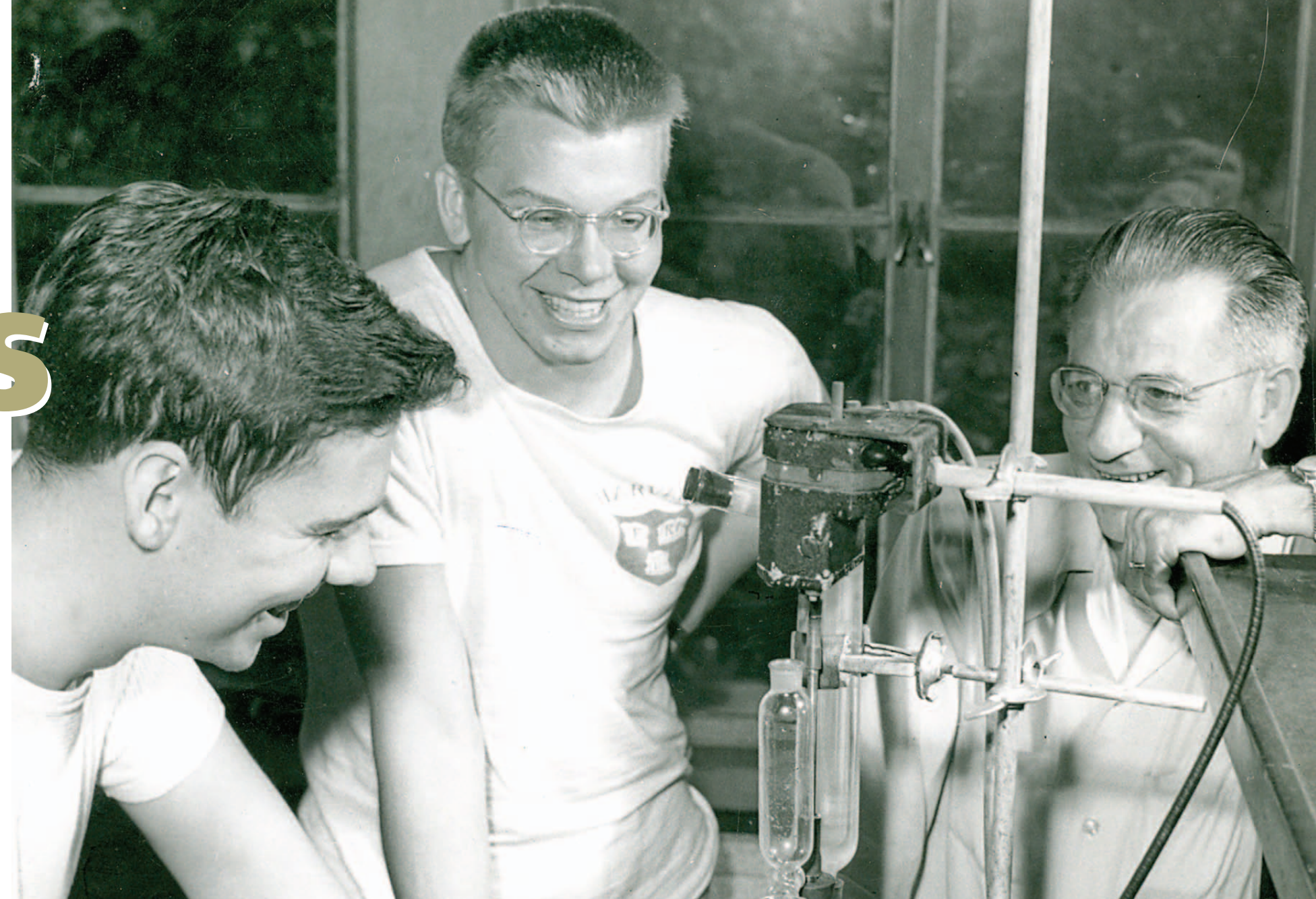
one decade after Holland was carved from the wilderness, that was converted into the college's first classroom laboratory in 1867.

It is from such simple origins that began the trajectory that led to today's tradition of excellence. The success is a tribute to skilled nurturing and innovation by faculty mentors with a deep commitment to the students in their care.

The tale is being celebrated during the coming school year in conjunction with a centennial: the creation of the departments of chemistry and physics as independent programs in 1909. The germination of the modest seed that was planted in the 1860s, the century-ago milestone is being heralded as the beginning of the growth and flowering that continue to the present.

To provide an enduring chronicle, the division is producing the coffee-table book *A Century of Science: Excellence at Hope College*, which will be available by the beginning of the school year and tells the story of all the science programs, not only chemistry and physics but also biology, computer science, engineering, the geological and environmental sciences, mathematics and nursing. Highlights of the academic-year commemoration will also include a series of invited addresses by alumni of the departments.

"We're using the 100-year anniversary as an impetus to look at the entire program in the sciences," said Dr. Graham Peaslee, who is helping to coordinate the celebration and is a professor of chemistry and chairperson of the department as well as a professor of geology/environmental science. "We want to make sure it's not just a celebration of chemistry or a celebration of physics."



The college's national reputation in the natural and applied sciences is built on the dedication of generations of outstanding faculty. Chemist Dr. Gerrit Van Zyl '18 pioneered the model of involving students in research, a practice that now reaches institution-wide. He is shown in the 1940s in Lubbers Hall, then the science building, with George Zuidema '49 and Eugene van Tamelen '47. (All images these pages from the Hope College Collection of the Joint Archives of Holland)

The book is being edited and designed by award-winning local author Valerie Van Heest, whose extensive bibliography includes numerous books, articles and videos focused on history, Great Lakes shipwrecks in particular.

Lavishly illustrated, the volume traces the eras of Hope science by facility—from

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that anonymous wooden lab, to the basement of Van Vleck Hall, to Van Raalte, Lubbers, VanderWerf, Peale and Schaap. The text draws heavily on the work of Dr. Irwin Brink '52, who taught chemistry from 1957 until retiring in 1996 and had previously written a history of science at the college for the *Legacies* campaign from which the Schaap Science Center grew.

Additional sources include a history of the department of mathematics by Dr. Jay Folkert '39, who taught at Hope from 1946 until retiring in 1982, and a history of geology by department founder Dr. J. Cotter Tharin, who taught from 1967 until retiring in 1996. An article about the founding and early years of Holland by local historian Paul Trap, reprinted from *Michigan History Magazine*, serves as an introduction, putting the college and program into context. Current faculty are also writing about their programs and the future of science at Hope, with a foreword by Dr. Moses Lee, the division's dean. An appendix will list all who have taught in the sciences.

The buildings help frame the story, but the book is really about the difference made by the dedicated professors whose work Hope's facilities support. The first science instruction was by a theologian, the Rev. Cornelius Crispell, who was one of the college's original five professors and was appointed to teach mathematics, natural philosophy and astronomy, but Hope soon began hiring specialists. The first faculty research space, in Van Raalte Hall (1903), was developed by biologist Samuel Mast—whose lasting impact on the campus also included designing Voorhees Hall. Today's signature practice of involving students in research as a teaching tool, and obtaining outside funding to support it, was developed by chemist Dr. Gerrit Van Zyl '18, who taught at Hope from 1923 to 1964.

Dr. Brink's account, of course, was informed by his experience of Dr. Van Zyl as both one of his faculty mentors and, ultimately, a colleague.

"Van Zyl was a true chemist. He liked to delve into his own projects," Dr. Brink said. "Out of that came this summer research

pathway that he blazed here at Hope long before it became popular. Van Zyl pioneered it. He was doing it before anyone else."

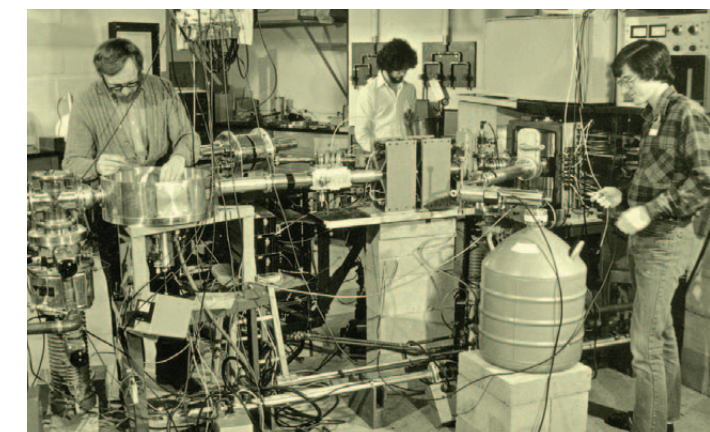
Van Heest's role has included not only collecting and synthesizing the work of others, but conducting hours of additional research herself, much of it at the Joint Archives of Holland. It's a process that has itself led to new connections, such as when she found herself looking through a batch of carefully organized portraits of young graduates from a century before—images that were more a part of the story than was first apparent.

"As I started to review what Irwin Brink had written about the chemistry department, he talked about Professor Almon Godfrey and how he had a habit of putting photographs of the graduates on the wall of his office and would track their progress," she said. "I realized, *These are his photographs.*"

A member of the faculty beginning in 1904, Dr. Godfrey died in 1923. The images that he displayed with such pride some 86 years ago to show the lives that his students were leading will now help show the richness of the college's tradition in the sciences.

It's a tradition that Van Heest has grown to appreciate, discovering through her work a gem that she hadn't previously had an opportunity to experience.

"Here in our small town of Holland, here in our small liberal arts college, we have a world-class science program," she said. "I didn't suspect that of small-town Holland. The amazing science department has me thinking that I'm going to introduce my small children to Moses Lee." 🐦



Access to cutting-edge instrumentation provides Hope students with opportunities available to few undergraduates elsewhere. In an image likely from the latter 1970s, Dr. Peter Jolivet of the physics faculty works in the ortec scattering chamber attached to the college's Van de Graaff accelerator, a landmark instrument in its day. Its successor is the Pelletron particle accelerator and attached microprobe facility installed in 2004, equipment available at only a few dozen institutions of any sort worldwide.

