

# Nobel Prize–winner reflects on science ed

**Nobel Prize–winner Dr. Richard Smalley '65 appreciates the importance of talented teachers, an excellent program and the facilities needed to support both.**

The teaching is an intangible that reflects intense personal dedication. Programs grow from that same dedication, but also require resources. Without resources, the facilities that both need can't happen.

Dr. Smalley won the Nobel Prize in chemistry with two fellow researchers in 1996 for their 1985 discovery of "buckyballs" (buckminsterfullerenes, or carbon 60). He is the Gene and Norman Hackerman Professor of Chemistry and Professor of Physics at Rice University in Houston, Texas, where he also directs the Center for Nanoscale Science and Technology.

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— Dr. Richard Smalley '65

He completed his freshman and sophomore years at Hope before transferring to the University of Michigan—two years, he noted, that had a profound impact. For example, he continues to admire the teaching skill of chemist Dr. J. Harvey Kleinheksel '22, "who was then and has for

all years since been in my mind the best teacher I've ever experienced."

"He had this wonderful, Socratic style of teaching that I've never seen anybody else match," Dr. Smalley said. "And I can tell you I've tried many years here at Rice to attain even a fraction of that level, and I've never done it. It's a very hard thing to do, and he did it magnificently."

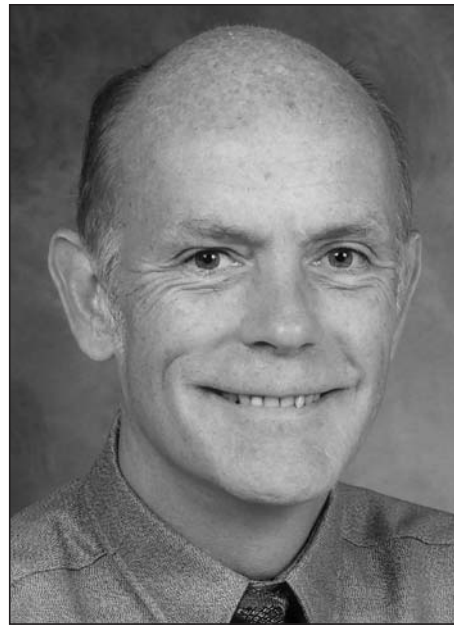
Dr. Smalley took organic chemistry with Dr. Gerrit Van Zyl '18 ("He was superb as well"), who was a pioneer in Hope's research-based approach to undergraduate science education. Dr. Smalley was already committed to attending the University of Michigan when his own chance arose to conduct research with Dr. Van Zyl. Based on his experiences in the years since he feels that research-based learning is crucial.

"Oh, I think it's absolutely essential," he said. "It was definitely essential for me to get involved in research, which I did do at Michigan in Ann Arbor and then later on at Shell."

"I learn best when I really get an

agenda—there's something I'm really inquisitive about, and then I can go in and learn about it in detail," he said. "So I'm really an experimentalist, and you can't exercise that muscle if you're not in the lab."

"And Hope has done very well on this score through the years," he said.



Dr. Richard Smalley '65

Dr. Smalley understands Hope's need for new science facilities. The *Legacies: A Vision of Hope* campaign is seeking \$36 million so that Hope can construct a new science building and renovate the 30-year-old Peale Science Center.

"The future is very challenging for small colleges—even for big universities," he said. "The cost of equipment is dramatically higher than it was when I went to school."

Rice, he noted, recently built a multi-million-dollar science building of its own. Much of the expense, he said, stemmed from the need to ventilate the labs safely.

"The best way to think of this building is as one giant air-handling machine," he said. "Well, that's a very expensive way to build a

building, and it takes money to keep it up. But that's the reality."

Hope's new building will emphasize cross-disciplinary connections between the sciences, a focus that Dr. Smalley feels fits well with the direction that science is taking.

"It's very hard to be a successful scientist and engineer and just understand the subject matter of your discipline any more, because all of these core disciplines in science and engineering have progressed so far in this past century, that the frontiers of these fields are almost exactly the same," he said. "And by and large it's at the level of structuring matter with the ultimate level of finesse, one atom or molecule at a time."

"And so areas of physics that chemists never thought they'd have to understand suddenly become terribly important, and the same is true for biologists and electrical engineers and so forth," Dr. Smalley said.

"And I think it's actually more fun to be a scientist and engineer than it was in the '60s," he said.

The changes temper his advice to students who, as he did, might worry about their specific course choices. Instead, he said, students can serve themselves well by preparing to be flexible for the unknown future. He noted, for example, that he regrets missing an opportunity to compete on Hope's debate team. "I think that probably the single worst decision I ever made in my life was not to do that," he said. "Because I have since realized that actually that's a very useful skill to develop."

"And so just learn how to use your brain. Keeping your body healthy and keeping your spirit intact is pretty much the agenda," he said. "And that agenda is pretty much what Hope College has been about." ✍

## Campus Notes

# Largest gift ever spurs new arena

**Hope is the intended recipient of a \$7.5 million anchor gift from the Richard and Helen DeVos Foundation to serve as a catalyst to enable the college to assume a leadership role in addressing some of the spectator facility needs of the college and Holland community.**

President James E. Bultman '63 made the announcement on Monday, March 26, during a press conference on campus.

"We are very grateful to Richard and

Helen DeVos, who through their generosity are allowing us to set a vision that will benefit generations of Hope students and Holland area residents for decades to come," he said.

President Bultman noted that representatives of the college are in the preliminary stages of exploring the potential impact of the gift on the design and location of a facility that would be owned and operated by Hope. The project is in addition to those being pursued through the \$85 million *Legacies: A Vision of Hope* campaign.

While still early in the process, college officials are envisioning a spectator facility that would seat approximately 3,500 people for athletic events and would be located on the eastern gateway of the campus.

"This gift builds on earlier communi-

ty-based initiatives, including the most recent efforts of the Area Center Authority and the Civic Center Task Force," President Bultman said. "It stimulates the process, which has both exciting and realistic potential."

President Bultman said that college officials will involve community leaders in the planning, including those representing the City of Holland, Holland Christian Schools and Holland Public Schools.

President Bultman said that the anchor gift will require other financial support.

"This is a project that Hope College cannot and should not complete independently," he said. "We look forward to engaging supporters in determining the feasibility of such a facility that would impact the college and community in mutually beneficial ways."

The gift from the Richard and Helen DeVos Foundation is the largest ever given to Hope for a capital project.

Hope has played its men's basketball games at the Holland Civic Center since the 1954–55 season. The men's basketball team has not played its home games in an on-campus facility since the 1929–30 season, when it moved from the Carnegie-Schouten gymnasium to the Holland (National Guard) Armory, where games were played until the current Holland Civic Center was built.

The Dow Health and Physical Education Center, opened on the Hope campus in 1978, was designed as an activity-oriented facility and has served to a limited degree as a spectator facility for some intercollegiate sports, such as women's basketball, swimming and volleyball. ✍