

9-1-2008

Scientific Evolution: Expanded opportunities

David Moffett
Furman University

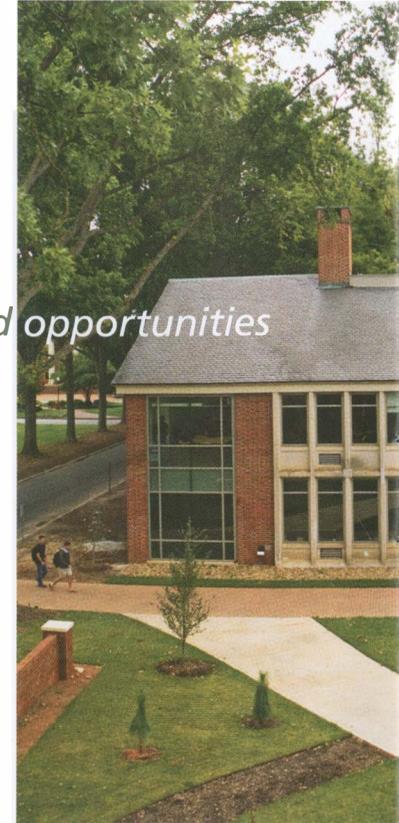
Follow this and additional works at: <https://scholarexchange.furman.edu/furman-magazine>

Recommended Citation

Moffett, David (2008) "Scientific Evolution: Expanded opportunities," *Furman Magazine*: Vol. 51 : Iss. 2 , Article 7.
Available at: <https://scholarexchange.furman.edu/furman-magazine/vol51/iss2/7>

This Article is made available online by Journals, part of the Furman University Scholar Exchange (FUSE). It has been accepted for inclusion in Furman Magazine by an authorized FUSE administrator. For terms of use, please refer to the [FUSE Institutional Repository Guidelines](#). For more information, please contact scholarexchange@furman.edu.

Expanded opportunities



Designed for research

As a result of decades of intense effort on the part of its faculty, Furman's chemistry department now houses one of the largest, if not *the* largest, arrays of chemistry research instrumentation of any undergraduate institution in the country. To meet our goal of exposing every undergraduate chemistry major to each of these pieces of instrumentation, we needed a building designed with this specific strength in mind.

The chemistry teaching labs in the Townes Center provide ample space for these state-of-the-art instruments and for the dozens of students who are trained on them each year. In addition, each of our faculty members directs a research lab in his or her area of expertise. The training that our majors receive during their early years at Furman prepares them to collaborate in the ongoing efforts of one of these research labs.

The fruits of these efforts are most apparent during the summer, when our department runs the largest summer undergraduate chemistry research program in the country. The Townes Center chemistry research labs have ample space for all of our research students, each of whom applies the training he or she has received to solve cutting-edge research problems.

Current research centers on such projects as detecting trace metal hazards in water supplies, discovering new pathways of DNA-drug interactions for the treatment of disease, and investigating the molecular basis of clean energy production. My lab focuses on developing new chemical reactions to facilitate the synthesis of potential cancer chemotherapeutics.

I can say — with absolute certainty — that there is no better campus than Furman to work with undergraduates on these challenging problems, and with the completion of the Townes Center for Science, there is no better facility in which to pursue our goals. Simply put, the Townes Center for Science is the finest teaching and research laboratory in which I have been privileged to work.

— BRIAN GOESS

The author, who holds a Ph.D. from Harvard University, joined the chemistry faculty in 2006.



Left: Spacious laboratories in the Townes Center have helped to encourage more students to remain on campus during the summer to conduct original research with faculty. Above: Marshall E. and Vera Lea Rinker Hall, provided by the Marshall E. Rinker, Sr. Foundation, as seen from the James B. Duke Library. The building extends from the north end of Plyler Hall; the pathway to the right leads to the yet-to-be-named "South Hall."

The **Townes Center for Science** gives the physics department new and exciting space for education, undergraduate research and public outreach in physics and astronomy. Along with most of its original space on the north end of Plyler Hall, the department now occupies the second floor of Rinker Hall, with its introductory physics laboratories and the Timmons Planetarium.

The quality and quantity of education space has been greatly expanded with the addition of new dual-use laboratories/classrooms, such as the advanced physics laboratory for sophomores taking modern physics, the experimental methods and electronics lab, and the nuclear lab. The heliostat laboratory is dedicated to studying the spectra and activity of the sun's surface, and a new seminar room boasts a spectacular view of the central campus fountains, buildings and mall.

Other new space provides for expanded research in such areas as optics, nanophysics and materials science. In one laboratory, tests are under way with fiber-optic cable driven by lasers to improve long-distance telecommunication, while the optical properties of the smallest man-made structures, nanoparticles, are studied in the applied optics laboratory. The future of research capabilities and opportunities will only get brighter as the department's liaison with Clemson University's Center for Optical Materials Science and Engineering Technologies grows, bringing more test equipment to be housed in the nanophysics/material science laboratory suite.

There is no doubt that the crown jewel of the department is the Timmons Planetarium and Simulation Laboratory. Students of all disciplines taking the introductory astronomy course — and physics majors in the astrophysics course — witness views and simulations of the night sky and the universe found only in museum planetariums.

With the completion of the Townes Center, the faculty and students of the physics department, and of Furman as a whole, have been challenged to meet the goal of increasing synergistic activities in physics, optics, materials and astronomy.

— DAVID MOFFETT

The author, who earned his Ph.D. from New Mexico Institute of Mining and Technology, joined the physics faculty in 1999.