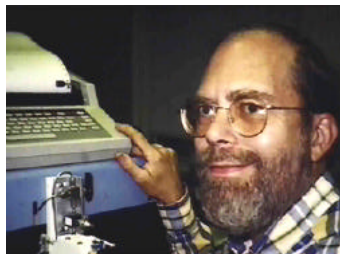




Sloan Career Cornerstone Center

Profiles of Chemists



Oliver Zafiriou

**Senior Scientist
Woods Hole Oceanographic Institute
Woods Hole, MA**

Education:

B.S. - Chemistry, Oberlin College
M.S. - Chemistry, Johns Hopkins
Ph.D. - Chemistry, Johns Hopkins

Job Description:

Senior Scientist, Marine Chemistry

Interview:

Oliver Zafiriou, senior scientist in the department of marine chemistry and geochemistry at the Woods Hole Oceanographic Institute, describes himself as having entered oceanography sideways. "Today, almost everyone working in this area comes from geochemistry or marine chemistry," he says. But in the late 1960s, Zafiriou found that joining Woods Hole with a Ph.D. in physical organic chemistry was a good way to get out of hard core chemistry, but still apply his post doctoral work in photochemistry. Zafiriou still studies photochemical processes. Recently, he has been working on a project to determine how light breaks down colored, dissolved, organic matter, or CDOM, a geologic material that plays an important role in the ocean. "One of our goals in this project is to better understand the marine production of carbon dioxide and how CDOM breaks down and forms CO₂."

The work he does will provide one part of the mass of data that will help scientists evaluate the role of CO₂ in global change. Zafiriou says he uses lab studies of CDOM samples and time-series studies to come up with specific information from which we can build a bridge back to the global ocean.

Zafiriou adds that the ocean is a particularly challenging lab for geochemical research. "It's always changing. You can't expect to go back and get the same answer every time." While this appeals to a spirit of adventure common among geochemists, Zafiriou cautions it's not all fun and games. "It's easy for students to fall in love with this area," he says. "The fun end is more visible in this kind of chemistry, but there's also a lot of work. A professor of Woods Hole in the 1970s used to say there was one word for success in oceanography-doggedness."

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