Rising Star

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Undergraduates in Research: Stephanie Moffitt (Chemistry, ?12) launched a career in materials research through undergraduate internships at UCSB and a research summer abroad in Ireland

BY CATHERINE NEWELL

When materials professor Ram Seshadri [2] gave his Honors Chemistry class a tour of his lab during Stephanie Moffitt?s freshman year, he opened a door for Moffitt to become a bright, new protégé in his research on functional inorganic materials. ?He encouraged everyone to get involved in research,? recalls Moffit, and she took that encouragement to heart and became a valuable member of his research team.

Moffitt spent nearly four years as an undergraduate researcher in Seshadri?s lab, affectionately called ?The Stephanizer? by her colleagues. There?s no irony in Moffitt?s
bold nickname, because she seized many opportunities to excel as an undergraduate, from participation in the UCSB Research Internships in Science and Engineering (RISE) program, to a summer studying abroad in Ireland at Trinity College. Today she also counts herself as an author on two published scientific papers well before her graduate school career began.

At the end of her freshman year, Moffitt participated in the RISE program. ?RISE brings undergrads from around the country to UCSB to participate in a research experience,? said RISE Program Director Julie Standish. ?It?s a very competitive program. Students apply for a 10-week summer research experience and are matched with mentors to gain first-hand experience in research.?

By her sophomore year, Moffitt was a full-fledged member of the Seshadri group, a real ?part of the team.? She attended lab meetings and Materials colloquium talks, and participated in research on multi-metal oxide complexes and intermetallics. Moffitt honed her skills as a lab assistant by completing complex techniques, such as sol-gel prep and arc melting.

Her contribution to the research was recognized when she was listed as an author on graduate student Josh Kurzman?s article on gold oxide complex research. Her work with Kurzman lead to another internship opportunity: A summer at Dublin?s Trinity College as part of the CISEI (Cooperative International Science and Engineering Internship) program.

In the group of Professor Silvia Giordani at Trinity College, Moffitt studied functionalizing carbon nanotubes in order to build light-activated switches. Outside of the lab, Moffitt experienced being part of an international group of students that practiced new laboratory techniques, toured a research hospital, and explored Ireland. When the students presented their research at the end of the summer, Moffitt won Best Poster Presentation.

During her junior year she presented her work at the American Chemical Society Undergraduate Research Symposium. Soon after she began working with Moureen Kemei, a graduate student in the Seshadri group, on magnetic frustration in chromate compounds, which required a trip to the Argonne National Laboratory near Chicago. Their research on magnetic frustration was published in January, and they were later invited to Argonne to present their results.

Moffitt was active in mentoring new undergraduates in the lab, and encouraged them to get involved in research opportunities through the RISE and CISEI programs. Professor Seshadri commented, ?It is important that our undergraduates seek to inform themselves of these opportunities.?

Seshadri is proud of Moffitt?s bright future. ?I think the experience of working in our lab has really turned Stephanie on to a career in research,? he explained. The Seshadri group and UCSB bid farewell to Stephanie Moffitt as she begins a PhD program in Materials Science this fall at Northwestern University.

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