

Abstract Submitted
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Interdisciplinary materials science projects used for linking physics and chemistry courses¹ ANDRA TRONCALLI, Austin College, Physics Department, BRADLEY SMUCKER, Austin College, Chemistry Department — The problems facing society are vast and more complex in scope than any one discipline. As educators we approach these problems from and teach students from specific disciplines; however, an interdisciplinary approach provides students with an opportunity to approach problems in a more integrated way. Last fall, we linked our Advanced Laboratory (upper level physics) and our Inorganic Chemistry (intermediate chemistry) classes. For part of the semester the students worked within their specific discipline and received in depth instruction from their professor. The interdisciplinary link between the two courses was achieved through projects in materials science, specifically high-temperature superconductors and carbon nanotubes. Some of the lectures were held with the combined classes, exposing students to an approach from the other discipline. The laboratory provided an excellent opportunity for meaningful student cooperation: the chemistry students synthesized materials, while the physics students characterized them. Their results were gathered into four posters, each poster authored by both physics and chemistry students, and a poster session allowed for the dissemination of the results to the greater campus community.

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