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# Crynoldebau / abstracts

Low Cost 3D-Printing Methods Used in an Undergraduate Project

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This paper reports and reflects upon the use of certain technological innovations in the planning and delivery of undergraduate physics student projects.

3D printing is a technology which has a potentially transformative effect in laboratory teaching and practical science across many scientific and engineering disciplines. I feel the theme sits in with a wider topic of technological innovations in equipment/apparatus for teaching.

Final year student projects are a cornerstone of most undergraduate science degree courses. In the Department of Physics at Aberystwyth University, students undertake major research-based projects, working in groups of one or two. These projects count for 40 credits, or 1/3rd of the overall final year assessment. The latest 3D printing technologies provide low-cost instrumentation solutions for optoelectronic materials characterisation, which would otherwise be inaccessible to such undergraduate student projects. This project also leaves a clear legacy, in terms of new apparatus, enhancing the scope of future projects.