

Case Study – Dave Richards.

David Richards joined Swansea University in 2010 to study for a foundation degree in General Engineering and went on to successfully complete a degree in Chemical Engineering with first class honours, in 2015.

Having interviewed for a number of positions within the Oil and Gas Industries and being uncertain as to whether this was the right path for him, David spotted an advertisement for a Master's scholarship with M2A. The topic "New insights into modern nanostructured PV technology. The latest thermal and infrared analysis in hyphenated systems" chimed with an interest in renewable energy, first discovered through an undergraduate module, offered the opportunity to pursue a career in an area which could potentially change the way energy is produced.

David thoroughly enjoyed the academic freedom of his research studies and successfully defended his Master's thesis in 2017.

Following his initial experience David realised the impact higher qualifications could have on him and also the impact his research could have on industry and society. As a result, he decided to continue in the field and looked for pathways to further develop his research skills and career prospects via a Doctorate, accepting an offer to study for an Engineering Doctorate with the M2A. His research "Application of perovskite solar cells onto flexible steel substrates" working with Tata Colors, is progressing well with results demonstrating the potential to provide a method of producing low-cost energy with a very small carbon footprint.

Being sponsored by Tata has allowed for visits to Ijmuiden delivering insight to working practises within an international organisation. Personal growth opportunities have come via frequent presentations to the industry partner, research peers and within the University, building confidence both in presenting and addressing questions from fellow researchers. Participation in conferences and workshops has provided an introduction to professional networks.

It is a little early to be thinking about 'what comes next' with 18 months of research study still to complete, however the research training and complimentary skills acquired to date have certainly enhanced my skills set and helped to position me as a strong competitor for employment opportunities. Taking the decision to accept a place on the EngD scheme has certainly been the right choice.