Diamond-like coatings (DLCs) provide a wear-resistant solid lubricant with a low coefficient of friction and are used in a wide range of applications. The deposition process and conditions play a critical role in determining the performance of the coating. These coatings are manufactured commercially but as new applications, particularly high demand automotive, are explored there is a need for further understanding of the relationship between processing parameters and performance.

Coatings produced in partnership with the industrial sponsor Miba (http://www.miba.com) will be evaluated using a variety of complementary experimental techniques. The project will correlate the attributes of the coating (internal stress, defect types and density, doping, surface characteristics) to the tribological performance.

This studentship (comprising a 1 year MSc and 3 year PhD training programme) will be undertaken in WMG at the University of Warwick as part of the EPSRC Centre for Doctoral Training in Diamond Science and Technology (http://www2.warwick.ac.uk/fac/sci/dst/).

This position provides a tax-free stipend at the national minimum set by EPSRC (£14,296 per annum for 2016-17). Tuition fees will be paid for UK/EU nationals for up to 4 years. The project provides an outstanding opportunity to be involved in high impact, cutting edge research while also giving valuable exposure to a major area of industry – Miba coatings in Austria and the automotive supply chain. The project will allow you to develop expertise in coatings, DLCs, advanced materials characterisation, tribology and modelling. You will have the opportunity to spend time at Miba’s labs in Austria.

Applicants with a first class or upper second bachelors or a master’s degree in any of the physical sciences (chemistry, physics, engineering, materials) are encouraged to contact Professor Barbara Shollock (b.shollock@warwick.ac.uk) for further information on the project and details of how to apply for this position.