



## Scanwel Ltd

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*Delivering expert solutions in vacuum, surface & nanoscience since 1974*

Dr Stephan Hofmann  
Reader in Nanotechnology  
Department of Engineering  
University of Cambridge  
9 JJ Thomson Avenue  
Cambridge, CB3 0FA

# SPECS™

13/05/2013

Dear Dr Hofmann,

### **Re: Letter of Support for Capital for Great Technologies**

We are writing in support of your capital equipment proposal to the EPSRC for a combined Near Ambient Pressure and Ultra High Vacuum X-ray Photoelectron Spectroscopy (NAP UHV XPS) analysis and preparation facility.

Established in 1974, Scanwel is an experienced manufacturer of standard vacuum components as well as custom chambers, parts and systems, putting us in an extremely strong position to integrate technologies from a number of our suppliers into individual, specialised systems. Our customers are mainly UK-based end users and OEMs in academia, government laboratories and industry. Our products find application in the production and development of advanced materials and processes in a number of high technology fields, including: nanotechnology, microelectronics, storage media, energy production and bio-medical and basic materials research of metals, oxides, polymers, coatings, etc. We provide our customers with unique tools to solve challenging scientific and analysis problems, accelerating the development of new materials and products.

The current proposal comes from SPECS, a fast growing and dynamic company of over 150 people situated in the centre of Germany's capital Berlin with a subsidiary, SPECS Zurich GmbH, based in Switzerland. SPECS forms a team of scientists and engineers engaged in the design and production of instruments for nanotechnology, material science and surface science in general. 35% of the staff at SPECS are educated to PhD level in Physics or Physical Chemistry, and have a strong interest in continuing their links with academic research, while at the same time furthering the development of cutting edge new products at SPECS.



SPECS leads the field in NAP-based research and development. The award-winning PHOIBOS 150 NAP ([http://www.specs.de/cms/front\\_content.php?idart=575](http://www.specs.de/cms/front_content.php?idart=575)) was developed to satisfy a wide range of applications; both for academia and industry, and in particular where advanced materials can be tested in “real-world environments”, greatly accelerating the time from advanced materials in the laboratory to applications in the field.

SPECS is in constant collaboration with academic partners to develop new solutions for a range of new application areas in the field of advanced materials. The in-situ NAP cell present in our current offer is one such example of our collaborative partnerships, having been designed via collaboration with the Fritz-Haber-Institute at the BESSY II synchrotron in Berlin. Dr Hofmann was involved in this personally, in particular regarding pioneering high pressure XPS measurements on the growth of novel carbon materials. In fact our company has been using Dr Hofmann’s results to promote the use of our latest NAP system for measurements of advanced materials (please find a presentation on NAP-XPS attached).

We are delighted to quote Dr Hofmann and colleagues at Cambridge for a state-of-the-art NAP-XPS system, especially because of the existing expertise in Cambridge with both UHV and high pressure systems. SPECS and Scanwel would be very interested in collaborating with Cambridge regarding further improvements in NAP cell design, and would contribute via the involvement of our technical development team in developing a solution that fits the exact experimental needs of the Cambridge group. An equivalent value in terms of research and development would comprise a significant fraction of the total cost of the experimental station.

We look forward to this exciting project and wish Cambridge every success with this current proposal. We look forward to discussing the details of this project in more detail at a later date.

Yours sincerely,

Dr Rupert Smith  
Product Manager SPM / Surface

Dr. Petar Stojanov  
SPECS Surface Nano Analysis GmbH