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15<sup>th</sup> International Conference on Surfaces,  
Coatings and Nanostructured Materials  
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## SHORT BIO:



Richard B. Jackman

Professor, Ucl Chair in Electronic Devices

Professor Richard B. Jackman heads University College London's (UCL's) Diamond Electronics Group (DEG) carrying out both fundamental research into the properties of diamond and associated carbons and applied research aimed at developing active electronic and sensing devices from this extraordinary wide band gap semiconductor. DEG has members around 10 persons, being a mixture of postdocs and PhDs. DEG's laboratory is within the London Centre for Nanotechnology (LCN) on UCL's campus, providing a wide variety of facilities, including a 255 m<sup>2</sup> of state-of-the-art cleanroom housing all key semiconductor processing technologies including Electron Beam Lithography and three Focused Ion Beam (FIB) lithography tools. DEG's own laboratory hosts a range of microwave and RF plasma tools, alongside a sophisticated suite of electrical characterisation equipment. Prior to appointment to UCL back in 1989, Richard was the Royal Society Eliz. Challenor Research Fellow at the University of Oxford, UK. The presentation will focus on aspects of Prof Jackman's recent publication in ACS Nano (IF 18.027 '*Laser engineering nanocarbon phases within diamond for science and electronics*' <https://doi.org/10.1021/acsnano.3c07116>, going on to show how this technology has enabled key breakthroughs to be achieved in the realization of diamond sensors for operation in extreme environments. Devices suited for imminent submarine deployment will be discussed.