17 May 2021 (Mon)	
14:00 - 14:30	**Welcome Remarks**
14:30 - 15:30	**An introduction to X-ray photoelectron spectroscopy for materials surface characterisation** Dr. Simon Hutton This presentation will provide a quick overview of the technique of XPS, recapping the basic principles and information that the technique provides. This will be done by reference to the latest, state-of-the-art XPS from Kratos Analytical, the AXIS Supra+. We will highlight through a number of examples, the different modes of acquisition including high resolution spectroscopy, small area analysis and XPS imaging. We will also introduce the capability to depth profile through thin-films towards the bulk material. *Biography:* Dr. Simon Hutton is currently Sales Manager for surface analysis products at Kratos Analytical. He started as an applications specialist and still has a 'hands-on' approach to instrument sales, acquiring applications data when time allows. Simon has many years' experience of XPS and surface analysis.
15:30 - 16:30	**Beyond XPS: Complementary surface analysis techniques** Dr. Adam Roberts This presentation will expand on the use of additional analytical techniques to give greater insight into a materials surface electronic and chemical states. It will focus on using these complementary surface analysis techniques to better understand a range of modern materials. Applications highlighted will include 2d materials, electronic structure of materials, batteries & power storage materials and polymer surface characterisation. *Biography:* Dr. Adam Roberts joined Kratos Analytical as an Applications Specialist in the Surface Analysis business in 1998. With over 20 years of experience in applications of surface analysis for materials characterisation Adam has great depth of knowledge of the subject. This scientific experience has been developed in parallel with commercial sales and marketing of the scientific instruments supplied by Kratos Analytical.
16:30 - 17:00	**Panel Discussion**

18 May 2021 (Tue)	
10:00 - 12:00	**XPS Demo (postponed)**
14:00 - 15:00	**An introduction to data analysis in X-ray photoelectron spectroscopy** Teddy Salim This presentation will provide the basics of data analysis in XPS. It will focus on spectral interpretation and composition determination from XPS data. Practical aspects that affect the accuracy of quantitative analysis will also be discussed. *Biography:* Dr. Teddy Salim completed both his B. Eng and PhD in materials science and engineering at NTU, Singapore. His doctorate thesis was on the self-assembly of polymers for photovoltaic applications. He has been a Postdoc in Prof. Lam Yeng Ming's group since 2012 and has joined FACTS since mid 2015. His work is on new approaches to control the morphology of hybrid perovskites and to improve their ambient stability. In terms of materials characterisation, his expertise lies in surface characterisation using techniques such as XPS and AES.
15:00 - 16:00	**Applications of XPS for nano-related materials research** Daniel H. C. Chua Engineering novel materials and understanding its properties has always been linked to the advancement in human civilization. Previous industrial revolutions were mainly made possible by the advancement of materials. To improve the understanding of materials, one requires many relevant characterisation tools to complement the growth and synthesis techniques. Today, the research work in nanomaterials is at the cutting-edge of technological advancement, without doubt, the x-ray photoelectron spectroscopy (XPS) is one of the key indispensable surface analytical tool for this push into the unknown. In this sharing session, we shall touch on a few different areas where XPS has been used extensively in the understanding of the material and its properties. Applications includes typical study of the bonding states of electrocatalyst and semiconducting materials, which can be extended into the novel 1D and/or 2D materials. Going beyond basic applications, we will also over a few detailed study where XPS was used as the primary characterisation tool to understand the material and physical properties. Some examples include understanding diamond-like carbon and biomedical applications. *Biography:* Daniel H. C. Chua received the B.Sc. (Hons.) in physics from the National University of Singapore in 1998. In 2004, he received the Ph.D.

	degree, at the Electrical Engineering Department of University of Cambridge, U.K. He worked in semiconductor and hard disk media industry focussing in failure analysis and materials characterization using surface analytical techniques prior to his postgraduate studies. Currently, he is an Associate Professor in the Department of Materials Science and Engineering in the National University of Singapore, Singapore. His current research interests focuses on the fabrication of nanomaterials and engineering its properties for different applications such as semiconductors and clean energy generation.
16:00 - 16:30	**Panel Discussion**
16:30 - 17:00	**Closing Remarks**