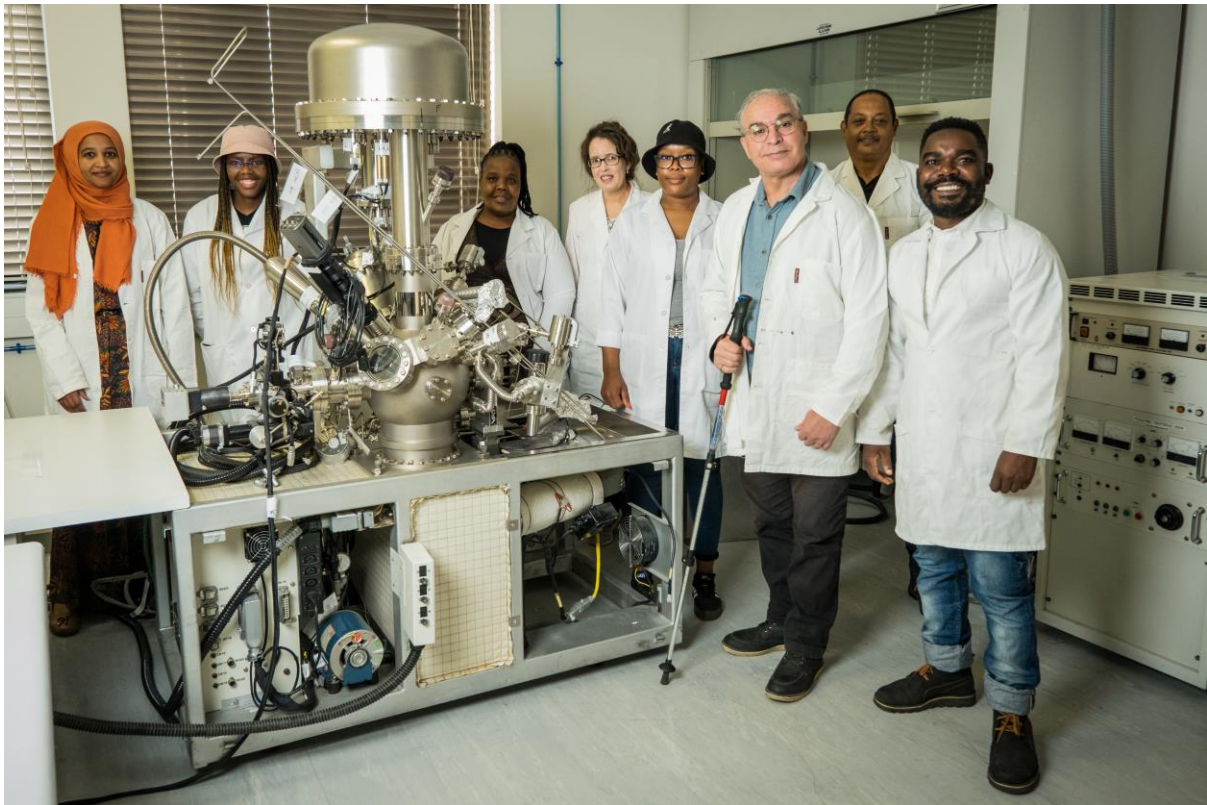


UNESCO chair receives advanced science equipment



Group photo – Dr Nagla Numan (Post Doctoral Fellow), Dr Nandipha Botha (Post Doctoral Fellow), Dr Nolubabalo Matinise (Senior Researcher), Dr Karen Cloete (Senior Researcher); Boitumelo Mabakachaba (PhD student); Prof Malik Maaza (Chair); Basil Martin (Engineer from NRF iThemba Labs) and Dr Itani Madiba (Senior Researcher) from the UNESCO UNISA Africa Chair in Nanosciences & Nanotechnology (U2ACN2) with the X-ray photo electron spectroscopy (XPS) new equipment

The X-ray photo electron spectroscopy (XPS) equipment is hosted at the UNESCO University of South Africa (UNISA) Africa Chair in Nanosciences & Nanotechnology (U2ACN2) node of the Western Cape at National Research Foundation iThemba Laboratories for Accelerator-Based Science (NRF-iThemba LABS). The equipment was received to further cement collaboration between Canada and South Africa through the activities of the Canada chair in energy and the U2ACN2. This happened through a long-established collaborative relationship between Prof Malik Maaza (UNISA) and Prof Mohamed Chaker (INRS). Furthermore, Dr Itani G Madiba spent one month (11 June to 12 July 2022) at the INRS for training and packaging the XPS equipment.

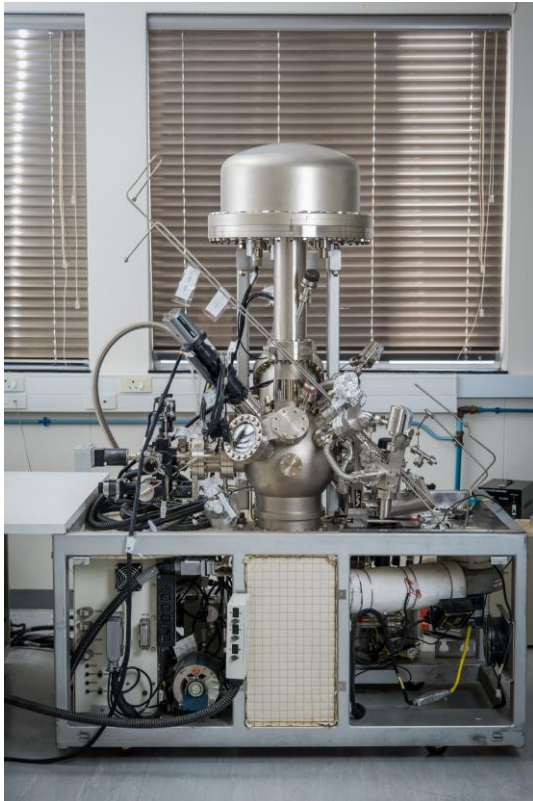
XPS is advanced, state-of-the-art surface science equipment based on the photoelectric effect operational principle to identify the elements, composition, electronic structure, and chemical states that exist within a material (thin films, solids, and powders). XPS is a powerful measurement technique because it not only shows what elements are present, but also to which other elements they are bonded.

The advantage of having the XPS facility is that it will open a pathway for a broad user community that will be able to access the facility in a cost-effective collaborative effort. This will advance the

research outputs, visibility of UNISA, research and development, and overall professional capacity building. All these outcomes align with the long-term objectives of UNISA, and they serve the Vice Chancellor's internationalization focus.

The XPS facility will complement a variety of characterization techniques within the U2ACN2. Significantly, it will enhance the quality of research data and research outputs of our students.

The College of Graduate Studies congratulates the U2ACN2. The future of researchers and postgraduate students at the U2ACN2 is promising.



New equipment - X-ray photo electron spectroscopy (XPS) new equipment

**By Hanli Wolhuter, Communication and Marketing Specialist and Musa Buthelezi, Intern, College of Graduate Studies*