



Microscope that gets to the heart of matter

New transmission electron microscope only one of its kind in Australia

Two Nobel Laureates and the NSW Chief Scientist & Engineer will officially unveil a vital piece of scientific infrastructure at the University of Sydney at a special event. The Thermo Fisher Themis-Z transmission electron microscope (TEM) has the highest resolution of any microscope in Australia. Its addition to the University of Sydney will provide researchers with unparalleled access to the mysteries of the atomic structure of materials. The 4.5-metre tall microscope is housed in the purpose-built \$150 million Sydney Nanoscience Hub in a room that is shielded from electromagnetic interferences and 'floats' architecturally independent from the building to minimise vibrations. The resolution of this analysis technique is breathtaking. The machine can obtain images with resolution better than 0.06 billionths of a metre (0.06 nanometres). That is about 10 times smaller than the distance between silicon atoms or five times smaller than the distance between carbon atoms in diamond. The microscope, which is available for industry as well, also has applications in geosciences, mining, chemical and mechanical engineering. The new NSW Chief Scientist & Engineer, Professor Hugh Durrant-Whyte will unveil the device in his first week of his official functions alongside two Nobel Laureates in Chemistry, Prof. Dan Shechtman, The Technion, Israel and Professor Joachim Frank, Columbia University, USA, who are visiting Sydney for the 19th International Microscopy Congress (IMC19), which is jointly hosted by the University of Sydney and UNSW. Event details: What: Sydney Microscopy and Microanalysis launch event Aberration-corrected Transmission Electron Microscope Where: Research Foyer, Sydney Nanoscience Hub, Physics Road, University of Sydney When: Tuesday, 11 September 2018. 1.45pm for 2pm start. The 19th International Microscopy Congress (IMC19), 9-14 September, at ICC Sydney, will centre around the theme, Microscopy: Bridging the Sciences, promoting collaboration across the primary streams of Frontier Issues; Instrumentation and Techniques; Physical and Life Sciences. Complimentary media passes to the launch event are available; apply by sending your name, position and publication title to sinead@zadroagency.com.au. Complimentary media passes to IMC19 are also available; apply by sending your name, position and publication title to sinead@zadroagency.com.au. Image: The Thermo Fisher Themis-Z transmission electron microscope (TEM)

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