

Centre for Ultrastructural Imaging, King's College London

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The newly formed Centre for Ultrastructural Imaging (CUI) of King's College London is managed by Dr. A Warley. The well qualified technical staff between them have over 100 years of collective experience in many diverse electron microscopy techniques. Newly equipped, with state of the art SEMs, TEMs and cryo-preparation equipment, the CUI has the technology for the examination of both biological and material science samples.

The current work load includes routine medical diagnostic services which are carried out on a Hitachi H7600 TEM and Hitachi S-3500N scanning EM which is also extensively used for dental research, whilst research workers have access to a FEI (T12) Tecnai Spirit, (Sphera) Tecnai T20 and a Quanta FEG SEM. All of these instruments are equipped with EDAX for spectroscopy. The T20 fitted with a LaB₆ emission source (as is the T12) also supports EELS, EFTEM, cryo-EM with associated low dose facilities and tomography, whilst Quanta users have access to Low Vacuum SEM, Environmental-SEM, and cryo-SEM as well as standard high vacuum, high resolution SEM.

Existing customers, from throughout the international scientific community include researchers from the school and departments within King's College London and from the outside academic community, pharmaceutical companies and forensic laboratories. Work carried out in the CUI will feature in the forthcoming BBC television series (Ray Mears, Extreme Survival).

Processing of samples is carried out within the unit and can include high pressure freezing, freeze substitution, progressive-lowering of temperature, freeze-fracture, critical point drying, shadowing, immunolabelling using the Tokuyasu technique, preparation of vitrified specimens, though not all at the same time! This list is not exhaustive. Routine electron microscopy is also carried out, though here at CUI we understand that no sample or project is ever routine. Potential users are encouraged to discuss their project with members of CUI staff to ensure that the most appropriate techniques and instruments are used.

For further information please visit our website:

<http://www.kcl.ac.uk/depsta/emu/>