"MULTIPLE SAMPLE SPECIMEN GRID FOR TRANSMISSION ELECTRON MICROSCOPY"

VCU # 12-067

Applications

- Transmission Electron Microscopy (TEM)

Advantages

- Faster and more efficient sample preparation
- Application of multiple samples
- User-friendly

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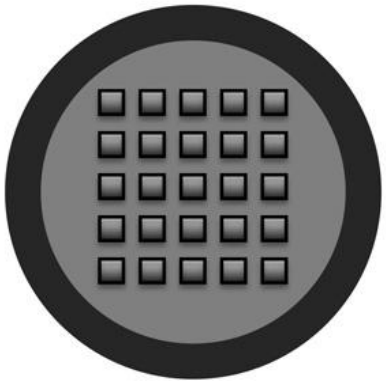
Market Need

Transmission electron microscopy (TEM) is used in many fields such as biological research, nanotechnology, material science and forensic science, in Universities and Industries around the world. In TEM, examination of multiple samples is limited by the time that it takes to prepare and insert each specimen on to the microscope. Sample loading time further increases with microscope usage and vacuum deterioration. While all other TEM related fields have been improved, the sample preparation has remained the same for decades.

Technology Summary

This invention presents a procedure to apply multiple samples to a transmission electron microscopy specimen grid. It saves time of grid preparation and sample insertion/removal, with an increased efficiency of 10-100 times and thus it can transform transmission electron microscopy technique into a high throughput technology. The invention presented here uses a combination of two already existing, adequate and mature technologies, therefore there is no need to create a new device or test each individual part, making it fast and affordable. Applying this invention into the TEM technology will not only make it user-friendly, but also much more efficient.



Schematics of the Multiple Specimen Grid

Technology Status

Patent pending: U.S. and foreign rights are available.

This technology is available for licensing to industry for further development and commercialization.