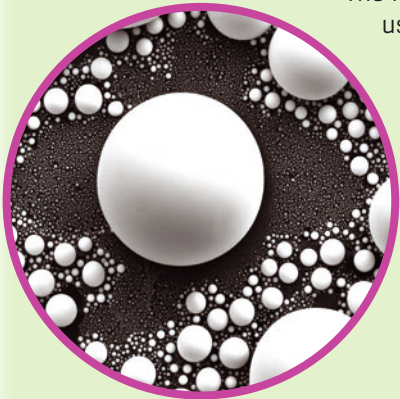


Get the best from your SEM

Our technical staff have more than 20 years' experience developing resolution standards for Electron Microscopy. These standards have been adopted, and are in widespread use by electron microscope users, manufacturers and service organisations all over the world.

Gold on Carbon has become an industry standard for resolution checks on SEMs and our Hi-res version will test even the best Field Emission SEM and FIB systems.

High Resolution images will show fine specimen detail with low noise, whilst maintaining a good range of grey levels. The varying size and orientation of the gold islands in our Gold on Carbon resolution standards generate high secondary electron SE and back-scattered BSD signals. This enables the gaps between islands and the fine detail on their surfaces to be resolved with a good range of grey levels against a darker carbon background.



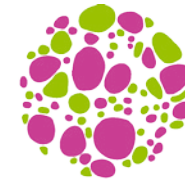
The near perfect round shape of tin spheres is particularly useful for astigmatism correction in a SEM, FESEM or FIB as well as testing image quality, distortion, contrast, brightness and probe size. Tin on Carbon standards are suitable for testing resolution over a wide range of magnifications for most instrument applications. For semiconductor applications where it is not possible to use Gold on Carbon, a Tin on Carbon resolution standard provides an excellent alternative.

For technical details and instructions for use please visit www.emresolutions.com/products/sem-products



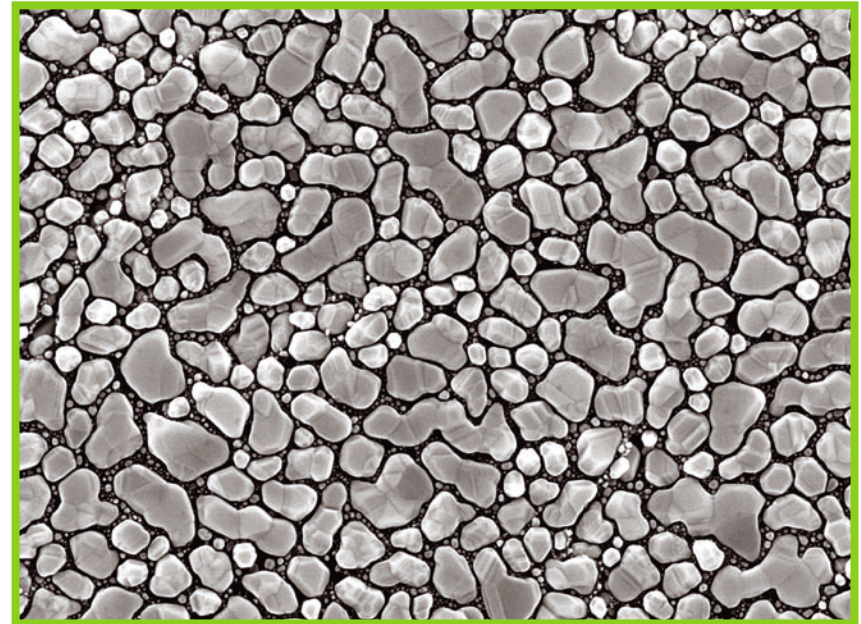
SEM stubs and mounts

Now available are our range of pin stubs, stubs for Jeol and Hitachi along with carbon adhesive tabs and stub storage tubes. See website for more details.



EM RESOLUTIONS
Supporting Electron Microscopy

Resolution Standards for Scanning Electron Microscopy



A range of high quality resolution standards for testing performance of benchtop through to the highest resolution Field Emission Scanning Electron Microscopes and Focussed Ion Beam systems. Available individually or as combinations.

e: info@emresolutions.com **t:** +44 [0]1799 522500

www.emresolutions.com

SEM Resolution standards

SGC Gold on Carbon resolution standards, with varying sized gaps between gold crystals on a carbon substrate, allow resolution tests to be made under actual SEM operating conditions. They can also be used to assess the quality of grey-level reproduction at high resolution. Gold on Carbon is available in three size ranges.

SGC5200 - good for all SEMs [islands in the range of 5nm-200nm]. High resolution SEMs should give good results in the gap test combined with good grey level reproduction. Medium-quality instruments may achieve a chosen gap resolution, but the grey-level production will be lower.

SGC0230 - ultra small gold islands [islands in the range of <2nm-30nm] requiring higher magnification to resolve the smaller particles. Particularly suitable for use with Field Emission SEMs and high resolution instruments.

SGC3030 low kV Gold on Carbon Resolution Standard [islands in the range of 30-300nm] has larger gold islands for applications where lower kV or magnification is used such as in benchtop SEMs.

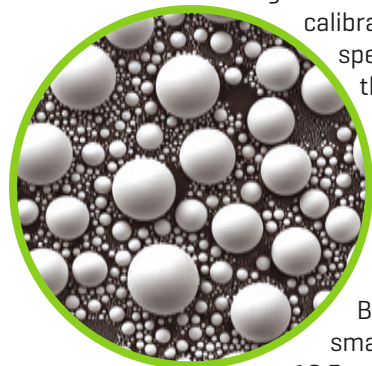


Both **SGC5200** Gold on Carbon and **SGC0230** Hi-res Gold on Carbon are usually supplied on 12.5 mm pin stubs. Please specify on your order if you require an unmounted resolution standard or a specific stub. To facilitate preliminary focusing and positioning at low magnifications an outline of a square mesh grid is provided on the surface of these standards.



STC Tin on Carbon resolution standards are an industry standard for resolution, astigmatism and image shift measurements for SEMs. The relatively high atomic number of tin gives the spheres high contrast against the carbon substrate. Tin on Carbon standards are available in two sphere size ranges.

STC5300 has sphere sizes [5nm-30µm dia.] that can be imaged over a wide range of magnifications, accelerating voltages and spot sizes, using a single calibration specimen. This is a particularly good resolution test specimen for training new users of SEMs. The ability to image the specimen at low magnification simplifies initial focussing at low accelerating voltages.



STC1099 has a smaller range of sphere sizes [10nm-100nm dia.] and is particularly suitable for modern high resolution Field Emission SEMs. It has a square mesh grid pattern to facilitate locating and positioning.

Both **STC5300** Tin on Carbon and **STC1099** small Tin on Carbon are usually supplied on 12.5mm pin stubs. Please specify on your order

if you require an unmounted resolution standard or a specific stub.



SEM Multi standards

Our new range of multi resolution standards offer various combinations of the commonly used resolution and magnification standards on one stub. These are ideal for SEM service engineers or demonstrators or just as a good test specimen for users to check that an instrument is working optimally. Any combination of tin on carbon [spheres in range 5nm - 30µm dia.], two sizes of gold on carbon [islands in the range 5nm-200nm or Hi-res 2nm-30nm] and ruled silicon [squares of periodicity of 10µm] can be supplied on a range of different SEM stubs.

STGGS Multi standard including Tin on Carbon, Gold on Carbon, Hi-res Gold on Carbon and ruled Silicon

SGG Multi standard including Gold on Carbon, Hi-res Gold on Carbon

STGS Multi standard including Tin on Carbon, Gold on Carbon, and ruled Silicon

STGG Multi standard including Tin on Carbon, Gold on Carbon and Hi-res Gold on Carbon

STG Multi standard including Tin on Carbon and Gold on Carbon

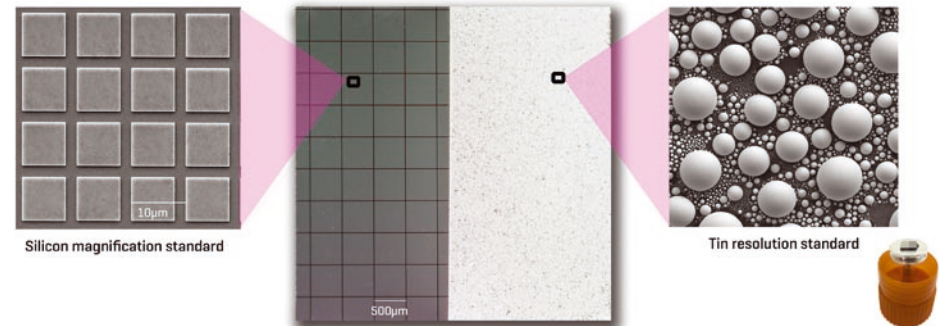
STGGSK Individual standards of Tin on Carbon, Gold on Carbon, Hi-res Gold on Carbon and ruled Silicon supplied as a value for money kit



For ordering details and prices please see our website

SEM Combination standards

The new range of combi standards are ideal for doing key checks on benchtop SEMs. Available on a range of stubs, they combine commonly used resolution and magnification standards on one stub for added convenience and time saving.



STS1053 Combi standard - combines a tin sphere resolution standard [spheres in the range of 5nm-30µm dia.] on a **SST10** silicon magnification standard [squares of periodicity of 10µm].

SGS1052 Combi standard - combines a low kV gold islands resolution standard [islands in the range of 30-300nm] on a **SST10** silicon magnification standard [squares of periodicity of 10µm].