

FIB and TEM for *in situ* analysis

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For materials research, the combination of FIB and TEM is extremely powerful. The high-resolution and detailed analysis afforded by the TEM can now be complemented by an SEM-type instrument and its concomitant space, with the additional benefits of ion-beam etching or deposition. This greatly expands the areas of application of *in situ* experimentation. Examples of the use of these tools in conjunction will be described, not only for using the FIB to fabricate TEM samples from site-specific areas, but also to allow testing which may be difficult to achieve inside the confined environment of a TEM.