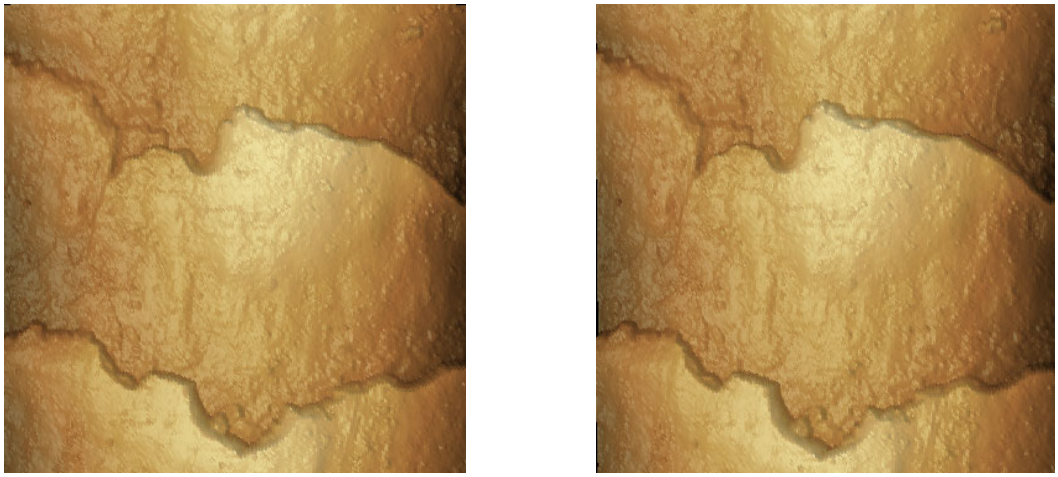
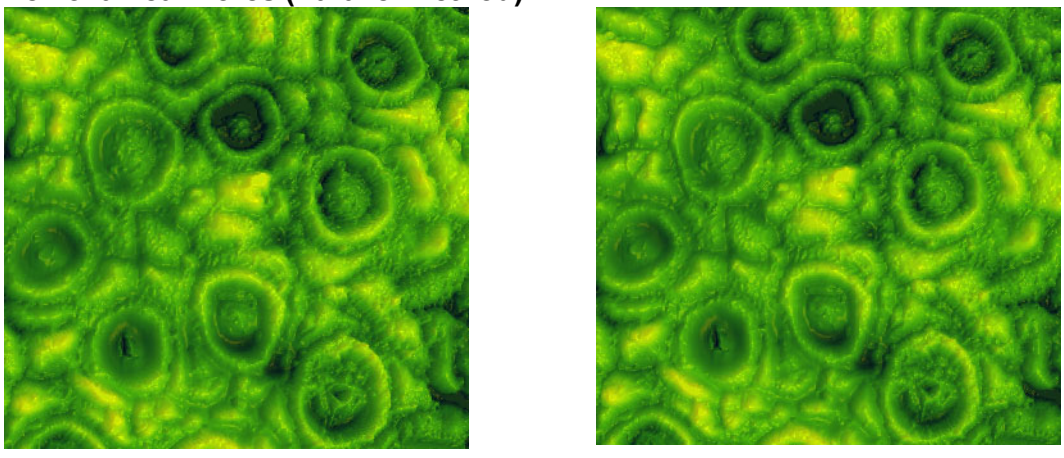
SPM Stereo Observational Method (Image Processing)

SPM images possess 3D information. Sets of two photographs can be constructed for stereo observation via image processing from this signal. The image shown is a stereo image. It may be viewed stereoscopically on a PC screen via the parallel method. People who have difficulty with stereo images can view them simply using a stereograph glasses. In addition, the example on the next page shows that observation is also possible using the crossing method (cross-eyed).
These images differ from the 3D images generally used with SPM. They are more realistic with respect to the observation of form. For example, it is a matter of interest that the tip of a hair cuticle is slightly swollen, and that the pores on a leaf are oriented randomly. In addition, if the surface of a ceramic of observed stereoscopically, it is surprising how distinctly the step and grain aggregation and position can be seen. Stereo processing is possible from a single image signal, even from past data.

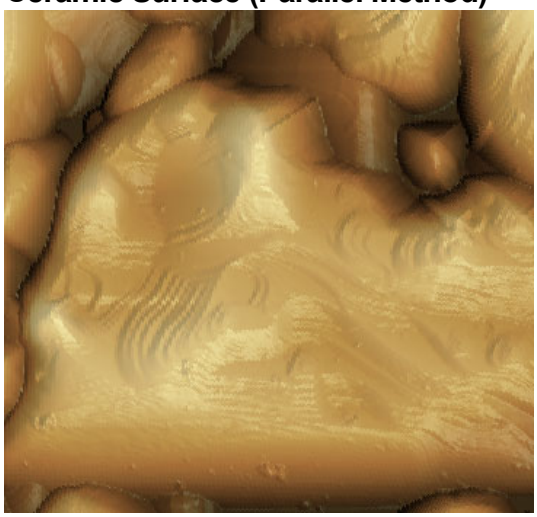
Hair (Parallel Method)

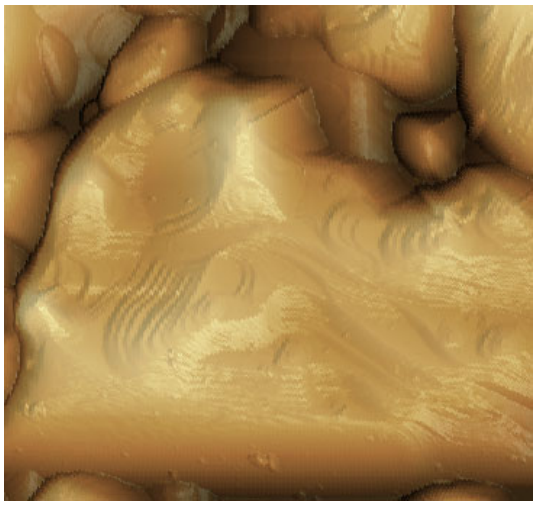


Zelkova Leaf Pores (Parallel Method)

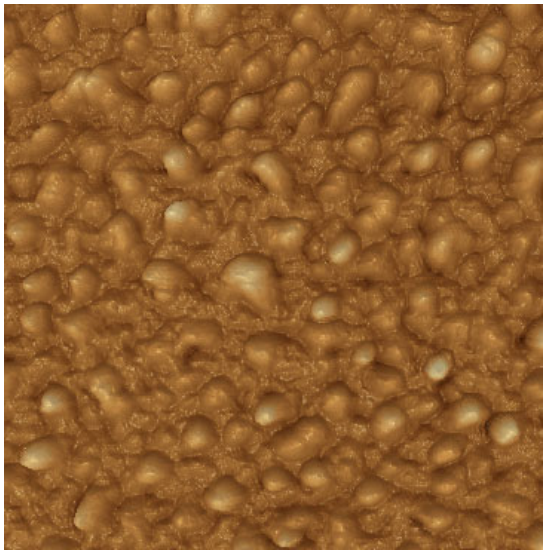


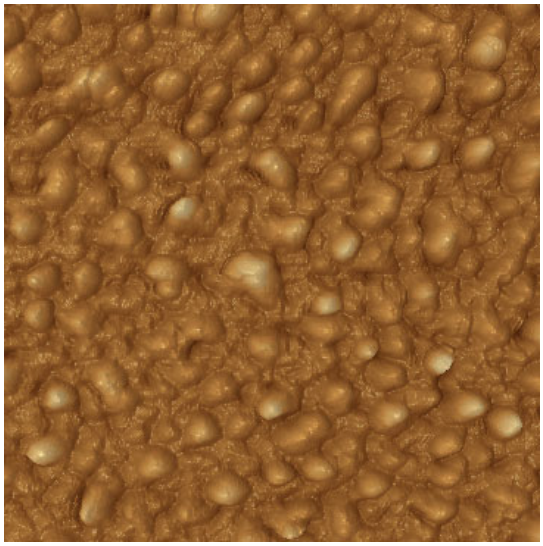
Ceramic Surface (Parallel Method)





Metal Deposition Particles (Cross Method)





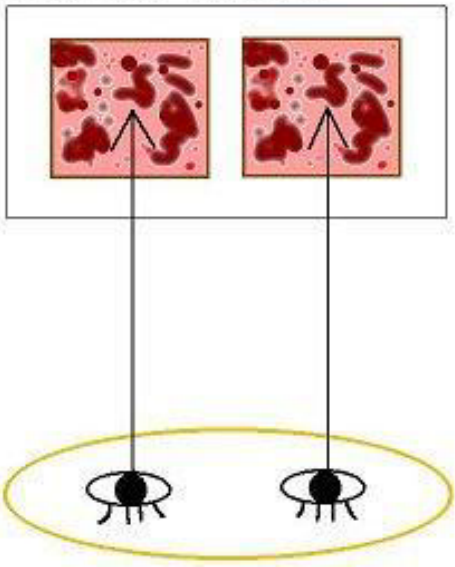
Metal Deposition Particles (Cross Method)

Note: Observation of Stereo Images

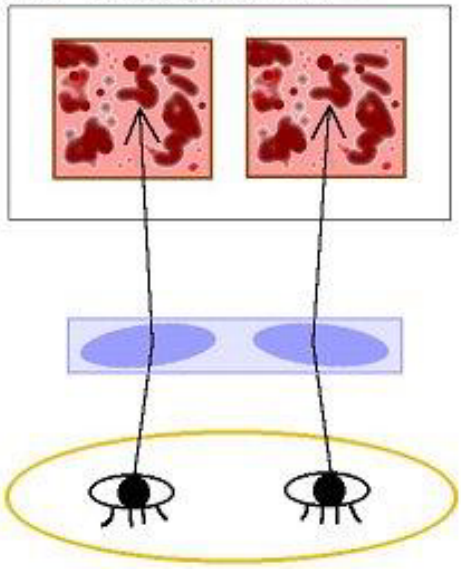
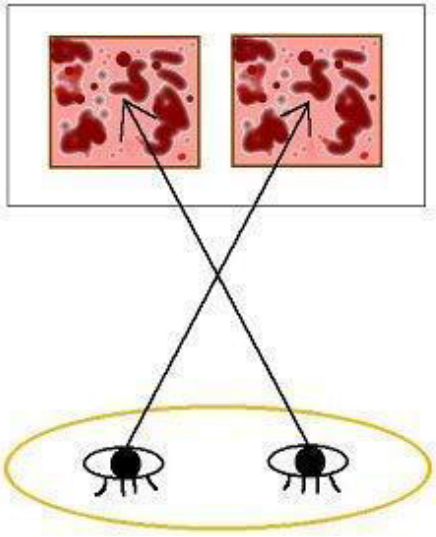
Observation of stereo images is done either with the naked eye or with stereograph glasses. People who find naked eye observation difficult are able to see the images easily using the glasses. However, there are individual difference in viewing method, and for the sake of eye safety, straining is not advised.

Next a variety of pattern diagrams are shown for the stereo observation method.

Observation via parallel method for stereo images (Naked eye)



Observation via parallel method for stereo images (Using a special lens)



Observation via cross method for stereo images (Naked eye)