

Is there a niche and future for the Tandem Scanning Microscope (TSM)?

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This is something like the Prince Hamlet's reflection: "To be or not to be, that's the question". Our answer to this question is positive: There are several such niches characterized by qualities by which the TSM agrees with and in which it differs or might differ from other kinds of microscopes. These are allows: (1) With the classical microscope the TSM agrees in speed of image acquisition and display, and in simplicity of microscope and specimen manipulation. (2) With the laser scanning microscopes it agrees in image resolution and contrast. (3) But it has some features by which it differs from both above device types: (a) It illuminates with white light (by means of rather cheap light sources). (b) It presents its (real time!) images directly to the human eye (a part of human brain). (c) In some instances the TSM is able to display instead of an infinitesimally thin layer of the object a *continuously changing stereoscopic* image, i.e. to provide us with a real *four-dimensional* image of a *living* and *moving* object. (d) It follows that the TSM can be used as a unique preparative microscope very different of the common stereo microscope. (d) For some users its price (considerably lower than the prices of most other scanning microscopes and also of high class classical microscopes) may be attractive. It is hardly understandable why no renown producer decided yet (as far as we know) to fill this gap in the market.