d. scanning means for moving the sensitive probe tip in a raster fashion over the sample surface in a plane substantially parallel to the sample surface;

e. deploying means for moving the sensitive probe tip in a vertical direction relative to the sample surface;

f. steering means for moving said light beam in coordination with the raster motion of the sensitive probe tip;

g. detection means responsive to the light beam reflected from said reflective surface for signalling changes in light beam position resulting from movement of the sensitive probe tip; and

h. means for creating an image of said probe in space at a point in space such that said image does not appear to move when said probe is moved, whereby detection mean output signals correspond to and are representative of the vertical motion of the sensitive probe tip and represent the contours of a scanned surface.

21. The microscope device of claim **20** including a lens system attached to a deformable ceramic transducer having an axis, said lens system creating said image of the probe substantially at a selected point along the axis of said transducer at which point said probe image appears to be stationary, notwithstanding lateral movement of the probe.

22. The microscope device of claim **20** wherein said energy source is a laser.

23. The microscope device of claim **20** wherein said detecting means include at least two photodetecting cells.

24. The scanning force microscope of claim **20**, wherein said steering means include mirror elements.

25. The scanning force microscope of claim **20**, wherein said steering means include lens elements.

26. The scanning force microscope of claim **20**, wherein said steering means include mirror elements and lens elements to direct said light beam from said light source to said reflective surface of the sensitive probe tip.

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