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8. The scanning force microscope of claim 1 where said optical assembly includes at least one curved surface mirror.

9. The scanning force microscope of claim 1 where said cantilever has a stylus mounted on one surface and during scanning said stylus intermittently contacts said sample.

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10. The scanning force microscope of claim 1 further including a lens interposed between said light source and said cantilever where said lens causes said light beam to converge approximately at said cantilever.

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