

Image Processing Technologies in Laser Scanning Confocal Microscopic System

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For the disability of the auto-focusing of the LSCM, this paper proposes a fast image process algorithm to focus on an object image based on the image gery and entropy of the grey graduation. The auto-focusing technology applied in the LSCM will improve the resolution of scanning image. Analyzing the characteristic of the optical structure of the LSCM and it's influence on the images quality, we carry the theoretic computation of the point spread function of the LSCM and adopt the expectation maximum arithmetic based on the maximum-likelihood estimation method to restore the blurred images. This step is very propitious to the visualization and result analysis.

KEY WORDS: confocal microscope; auto focusing; image restoration; visualization

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