TECHNOLOGY

Subwavelength Resolution Optical Microscopy

OVERVIEW

Optical microscopy, both transmission and fluorescence, has limited spatial resolution due to well-known limits of diffraction. In addition, few methods are available to increase spatial resolution. The invention describes a novel and a simple method of increasing optical resolution. The present technology can be specifically used to image subwavelength features in the sample such as cells, bacteria and integrated circuits etc.

APPLICATIONS

Optical and/or fluorescence microscopy. Scanning probe microscopy. Photolithography. Semiconductor manufacturing and quality control.

ADVANTAGES

Offers high resolution imaging microscale objects such as organelles inside the cell Better approach than that involving lens with negative refraction materials. Allows imaging distant from the film and throughout a subwavelength structure. (Ex. single cell)

STAGE OF DEVELOPMENT

Proof of concept validated.

R&D REQUIRED

N/A

LICENSING POTENTIAL

UMB seeks to develop and commercialize via an exclusive or non-exclusive license agreement and/or sponsored research with a company active in the area.

CONTACT INFO

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Additional Information

INSTITUTION

University of Maryland, Baltimore

PATENT STATUS

U.S.Patent 8,027,039 issued 09/27/2011

LICENSE STATUS

Available for licensing

CATEGORIES

- Devices
- Imaging devices

INVESTIGATOR(S)

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