Imaging The Surfaces Of Optically Transparent Materials

Tech ID: 33906 / UC Case 2023-706-0

BRIEF DESCRIPTION

A breakthrough imaging technique that provides high-resolution visualization of optically transparent materials at a low cost.

FULL DESCRIPTION

IRIS is a novel imaging technology designed to visualize the surface of optically transparent materials with exceptional clarity and detail. By adjusting structured illumination—its type, size, intensity, and periodicity—IRIS can discern minor surface variations, including deformities and contaminants. This technology has proven its worth in visualizing surfactant production by bacteria on a soft agar surface, showcasing its ability to monitor movement and changes at liquid-solid and liquid-liquid interfaces.

SUGGESTED USES

- Life sciences research for studying cellular and microbial interactions.
- Chemical industry for analyzing reactions and processes at transparent interfaces.
- Manufacturing and engineering for quality control and materials testing.
- Environmental monitoring by visualizing pollutant behaviors in water and other transparent mediums.

ADVANTAGES

- High-resolution visualization of surfaces at a low cost.
- Simple to implement and nondestructive, with no need for material modification.
- Ability to discern features as small as 50 microns.
- Applicable to a wide range of optically transparent materials.

PATENT STATUS

Patent Pending

RELATED MATERIALS

- Patent application

CONTACT

Ben Chu
ben.chu@uci.edu
tel: .

OTHER INFORMATION

CATEGORIZED AS

- **Optics and Photonics**
  - All Optics and Photonics
- **Imaging**
  - Medical
  - Other
- **Medical**
  - Imaging
  - Research Tools
- **Research Tools**
  - Other

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5270 California Avenue / Irvine,CA
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