

# workshop

Lise-Meitner-Strasse 6, D-89081 Ulm, Germany  
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**WITec**  
focus innovations

## Introduction to Confocal Raman and Scanning Probe Microscopy November 6., 2009, Stanford University Stanford, California, USA

The workshop will give a detailed introduction to the operational principles and instrumental configurations relevant to confocal Raman and Scanning Probe Microscopy (AFM, SNOM, Pulsed Force Mode). The speakers will cover several aspects of Raman and SPM imaging and its fields of applications. Scientists

interested in how to chemically identify and image the compounds of a sample at the highest spatial resolution are invited to participate. Typical research fields for confocal Raman imaging are pharmaceuticals and cosmetics, materials and polymer sciences, archaeology and geoscience,

forensics, coatings, thin films and all fields where a clear identification of the distribution of chemical compounds is a necessity.

### Preliminary Program

#### Friday, 6th of November 2009

09.30 - 10.00

10.00 - 10.10

Mr. Bob Hirche

10.10 - 10.25

Dr. Chuck Hitzman

10.25 - 11.00

Dr. Klaus Weishaupt

11.00 - 12.00

Dr. Fernando Vargas

12.00-13.00

13.00-14.00

#### Registration

Welcome

Stanford Nanotech facility

Combining SPM and Optical techniques

Introduction to Confocal Raman Microscopy and Atomic Force Microscopy

*Lunch Break, incl. Lunch Snack*

Equipment Demonstration of the new alpha500 combined AFM/Confocal Raman Imaging System

### Speakers

#### Mr. Bob Hirche

Mr. Hirche is Managing Director at WITec Instruments Corp., Maryville, TN, USA.

#### Dr. Chuck Hitzman

Dr. Hitzman is the Director of the Surface Analysis Laboratory at the Geballe Laboratory for Advanced Materials at the Stanford University, CA, USA.

#### Dr. Klaus Weishaupt

Dr. Weishaupt is managing Director of Marketing & Sales and cofounder of WITec GmbH, Ulm, Germany.

#### Dr. Fernando Vargas

Dr. Vargas is Senior Application Scientist at WITec GmbH, Ulm, Germany.



Fig. 1: WITec alpha500 Automated Confocal Raman & Atomic Force Microscope.

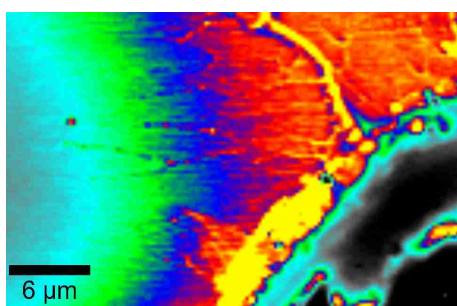


Fig. 2: Splash of Si on a Si-Solar cell device (integral intensity of the 1st order Si peak).

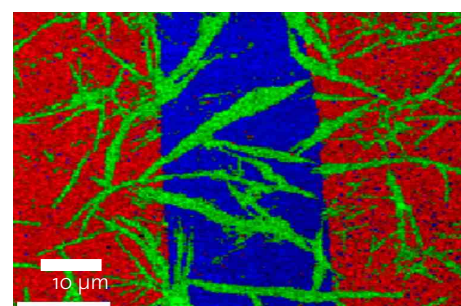


Fig. 3: Color-coded confocal Raman image of a 7.1 nm PMMA layer (red) and 4.2 nm contamination layer (green) on glass (blue).

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## General Information

The workshop is free of charge but it requires registration due to limited availability of places. In order to register, please fill in the form below and mail or fax it to WITec Instruments Corp. (Fax: 865 984 4441). You may also send your contact information electronically to

**bob.hirche@witec-instruments.com**

The number of participants is limited, so book early to save your place.

## Workshop venue:

Stanford University  
476 Lomita Mall  
Stanford, CA 94305  
USA

Room: Mc Cullough Building Room 335

## Local Contact Person:

Dr. Chuck Hitzman  
Stanford University  
Surface Analysis Lab  
Geballe Laboratory for Advanced Materials  
476 Lomita Mall  
Stanford, CA 94305  
phone 650 498 5860  
e-mail: chitzman@stanford.edu

## Registration

I would like to register for the Workshop.

Institution:

E-mail:

Name and Title:

Address:

Phone:

Signature:

Fax: