Max Planck Institute for Metals Research

Stuttgart Center for Electron Microscopy – StEM
Heisenbergstrasse 3, D-70569, Stuttgart, Germany
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International Workshop on "Current Topics in TEM: Plasmonics and Strain Mapping"
Ringberg Castle, Tegernsee Lake (Bavaria), Germany
July 22 – 25, 2009

Program

Wednesday, July 22, 2009

15:15–15:20 Peter A. van Aken
Welcome

Session I Plasmonics

1. Theory
(Chairs: Ralf Vogelgesang and Peter A. van Aken)
15:20–16:00 Ernst Jan Vesseur (p/ Albert Polman)
Plasmonics applications
16:00–16:40 Alexandre Dmitriev
Bottom-up functional nanoplasmonics

Coffee Break

17:00–17:40 Francesco Sottile
Time-dependent DFT of excited states
17:40–18:20 Luc Henrard
DDA calculations of nanoparticles

18:30 Dinner

After 20:00 **Posters & Beer**
(Chair: Peter van Aken)

Thursday, July 23, 2009

Session I Plasmonics

2. Experiment

(Chairs: Luc Henrard and Jaysen Nelayah)

a) Optics:

9:00–9:40 Ralf Vogelgesang
Direct near-field optical imaging of higher-order plasmonic resonances

9:40–10:20 Harald Giessen
3D Metamaterials

Coffee Break

b) Electron microscopy

10:50–11:30 Odile Stephan
Valence-loss electron microscopy

11:30–12:10 Lin Gu
Applications of TEM in valence energy-loss spectroscopy

12:20 Lunch

(Chairs: Odile Stephan and Wilfried Sigle)

14:00–14:40 Mathieu Kociak
Electromagnetic response of nanoobjects

14:40–15:20 Bernhard Schaffer
EFTEM of Au nanoparticles

15:20 – 16:00 Jaysen Nelayah
EFTEM of coupled nanoobjects

Coffee Break

16:30–17:10 Wilfried Sigle
EFTEM of nanoholes

18:30 Dinner

Friday, July 24, 2009

Session II Strain Mapping

(Chairs: Pedro L. Galindo and Christoph T. Koch)

8:50–9:30 Fritz Phillipp
Strain mapping methods – an overview

9:30–10:10 Martin Hÿtch
Introductory lecture on geometrical phase analysis and holographic interferometry for strain mapping

Coffee Break

10:30–11:10 Florent Houdellier
Application of GPA and holographic interferometry to materials science problems

11:10–11:50 Burak Özdöl/Christoph T. Koch
Quantitative characterization of strained heterostructures by HRTEM

11:50–12:30 Achim Trampert
Application of strain mapping in the studies of semiconductor growth

12:30 Lunch

(Chairs: Martin Hÿtch and Fritz Phillipp)

14:00–14:40 Nengyun Jin-Phillipp
Strain and defect formation in semiconductor quantum dots

14:40–15:20 Pedro L. Galindo
The peak pairs algorithm for strain mapping from HRTEM images

Coffee Break

15:50–16:30 Andrey Chuvilin
Understanding of CBED in direct space

16:30–17:10 Damien Jacob
Strain measurements by CBED

17:10 – 17:40 General discussion and closing

18:30 "Bavarian Night Buffet" Dinner