

**International Center of
Advanced Materials and
Electron Microscopy**

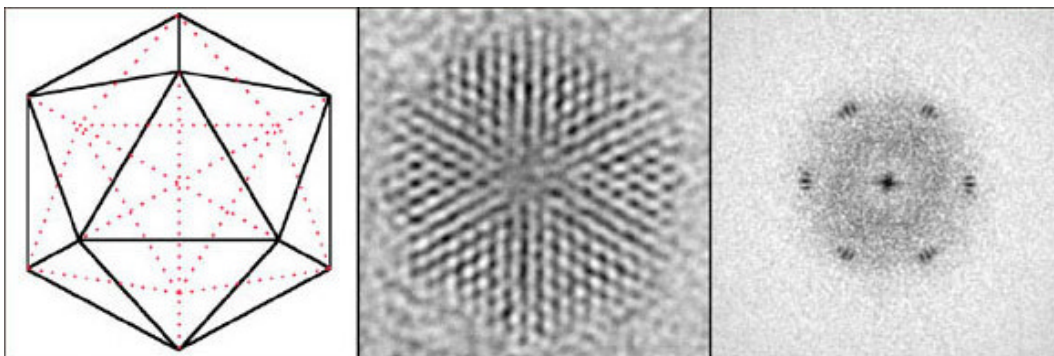
Autumn School 2003



**"New developments in nanostructured materials-
synthesis, characterization, functionality"**

September 27th – October 1st, 2003

**Humboldt-University of Berlin,
Institute of Physics
Chair of Crystallography**



Shape determination of Ag particles
(by courtesy of H. Hofmeister, MPI Halle)

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The assistance of staff members of the Fritz Haber Institute Berlin is gratefully acknowledged.

Sponsors

The Autumn School 2003 is financially supported by:

German Research Foundation (DFG)
Max Planck Institute of Microstructure Physics, Halle
Fritz Haber Institute of the Max Planck Society, Berlin
Paul Drude Institute, Berlin
Ferdinand Braun Institute, Berlin
German Society of Crystallography

and by the following companies:

FEI
JEOL
Gatan

The organizers express their gratitude for this financial support.

Locations of the Autumn School:

1. Accommodation:

Berolina Airport Hotel
Radickestraße 76 (at corner Adlergestell)
12489 Berlin-Adlershof

Dorint Hotel
Rudower Chaussee 15
12489 Berlin-Adlershof

2. Welcome Party

Einstein-Newton Room
Wista Building
Rudower Chaussee 17 (at corner Vollmerstrasse)
12489 Berlin-Adlershof

3. Registration, Lectures, Poster Session

Lecture Hall for Chemistry and Physics (LCP building)
Newtonstrasse 14
12489 Berlin-Adlershof

The lecture hall is in a walking distance of 15 to 20 minutes from the Berolina Airport Hotel and of 5 to 10 minutes from the Dorint Hotel.

Opening hours of the registration office located at the LCP building:

Saturday, September 27th: 16.00 h – 18.00 h

Sunday, September 28th: 9.15 h – 18.00 h

Monday, September 29th: 8.30 h – 18.00 h

Tuesday, September 30th: 8.30 h – 17.00 h

Wednesday, October 1st: 8.30 h – 15.30 h

Poster session:

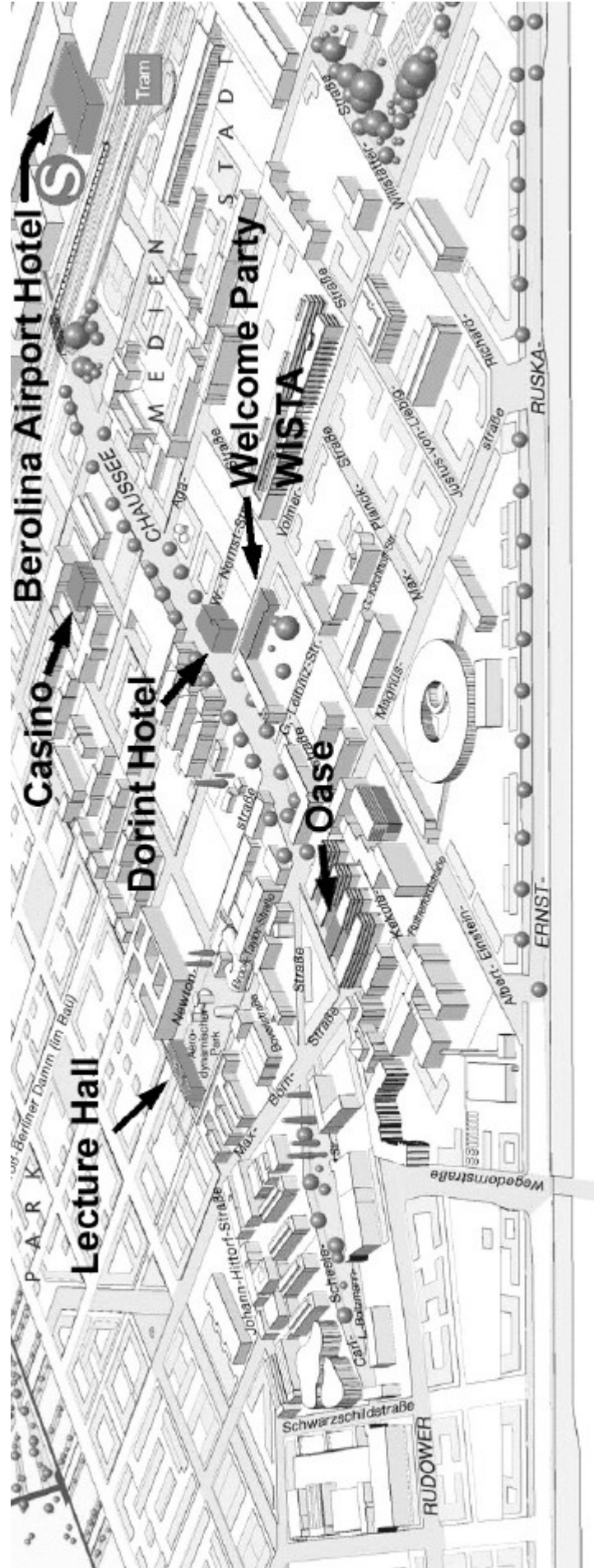
The posters should be mounted as soon as possible on Sunday. Mind your poster number as indicated on the poster list enclosed in your conference materials. Please, affix your poster at the poster board having the according number.

All authors with an even poster number should present their posters in session I (Tuesday, September 30th, 16.30 h – 17.30 h). The posters with an odd number have to be presented in session II (Tuesday, September 30th, 18.00 h – 19.00 h).

Autumn School on Materials Science and Electron Microscopy
"Progress in Advanced Materials Science through Electron Microscopy"
Berlin, September 27th - October 1st, 2003



Venue of the Autumn School (Berlin-Adlershof)



Saturday, September 27th, WISTA building

18.30 Welcome party

Scientific Program

Sunday, September 28th, LCP building

- 10.00 – 10.15 W. Neumann, Berlin
Introduction
- 10.15 – 11.00 Z.L. Wang, Atlanta
Functional oxide nanobelts - from materials to nanodevices
- 11.15 – 12.00 W. Schwieger, Erlangen
Functionalised hierarchical materials by supported crystallisation
- 12.15 – 13.30 Lunch
- 13.30 – 14.15 H. Hofmeister, Halle
Twinning and multiple twin formation in the growth of metal and semiconductor nanorods
- 14.30 – 15.15 G. Botton, Ottawa
Applications of analytical microscopy methods to nanoscale materials
- 15.30 – 16.00 Coffee break
- 16.00 – 16.45 A.K. Gutakovski and A. Aseev, Novosibirsk
HREM and STM characterization and application of low-dimensional semiconductor structures
- 17.00 – 17.45 V.I. Panov, Moscow
Local optical microscopy and scanning tunneling spectroscopy of nanostructures

Monday, September 29th, LCP building

- 9.00 – 9.45 D.S. Su, Berlin
Nanostructured materials in heterogeneous catalysis
- 10.00 – 10.45 S. Giorgio, Marseille:
Structure and reactivity - Core-shell bimetallic particles
- 11.00 – 11.30 Coffee break
- 11.30 – 12.15 G. Rupprechter, Berlin
HRTEM characterization of supported Pd nanoparticles in real and model catalysts:
Correlations between surface structure and adsorption/reaction properties
- 12.30 – 13.30 Lunch
- 13.30 – 14.15 O. Milat, Zagreb
Nano-size modulation in complex composite crystals
- 14.30 – 15.15 K. Pielichowski, Krakow
Nanostructured polyurethane materials with enhanced thermal properties
- 15.30 – 16.00 Coffee break

- 16.00 – 16.45 B. Rellinghaus, Duisburg
Structure determination of FePt nanoparticles by means of HRTEM and contrast simulations
- 17.00 – 17.45 C. Henry, Marseille
Nucleation, growth, and morphology of metal clusters on oxide surfaces studied by AFM and TEM

Tuesday, September 30th, LCP building

- 9.00 – 9.45 A. Schaper, Marburg
Synthesis, structure, and properties of carbon and carbon/metal hybrid nanoparticles
- 10.00 – 10.45 M. Leonowicz, Warsaw
Formation, structure, and properties of functional polymer matrix nanocomposites
- 11.00 – 11.30 Coffee break
- 11.30 – 12.15 M.P. Pileni, Paris
Mesoscopic structures of nanocrystals: Collective properties and uses
- 12.30 – 13.30 Lunch
- 13.30 – 14.30 A. Trampert, Berlin
Structure - functionality relation in novel nitride-based semiconductor nanosystems
- 14.45 – 16.30 Short oral presentations of posters
- 16.30 – 17.30 Poster session I
Beer and Pretzels
- 18.00 – 19.00 Poster session II

Wednesday, October 1st, LCP building

- 9.00 – 9.45 U. Kaiser, Jena
Opportunities and challenges of TEM characterization of nanostructured materials
- 10.00 – 10.45 M. Giersig, Bonn
Magnetic nanostructures: preparation and application
- 11.00 – 11.30 Coffee break
- 11.30 – 12.15 F. Huisken, Jena
Silicon nanoparticles and carbon nanotubes by laser pyrolysis
- 12.30 – 13.30 Lunch
- 13.30 – 14.15 S. Christiansen, Halle
Nanostructures in (Si,Ge) – formation, growth, and characterization
- 14.30 – 15.00 G. Radnóczy, Budapest
Formation of carbon and CN_x nanostructures
- 15.15 Closing remarks