

**Summer School on Micro- and Nano- structural characterization  
of materials, focused on electron microscopy**

July 11-15, 2012, Thessaloniki, Greece



## School Program

### Tuesday, July 10<sup>th</sup>, 2012

Arrival Day

19.30 Registration

20.30 Welcome Reception

### Wednesday, July 11<sup>th</sup>, 2012

8.00 Registration

8.45 **Welcome**

Organizing Committee Chairman Prof. Efstathios K. Polychroniadis  
Aristotle University of Thessaloniki, Greece

#### First Session

**Chairperson:** Prof. Efstathios K. Polychroniadis

9.00 **Principles and design of the Transmission Electron Microscope (TEM)**

Dr. Aria Andreadou  
Aristotle University of Thessaloniki, Greece

10.00 Coffee Break

10.20 **Physical concepts of diffraction and electron crystallography**

Dr. Alkyoni Mantzari  
Aristotle University of Thessaloniki, Greece

11.50 **Contrast and image formation in TEM**

Dr. Andreas Delimitis  
Centre for Research and Technology Hellas, Greece

13.00 Lunch



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**Second Session**

**Chairperson:** Prof. Nikos Frangis

- 14.00 **High Resolution Electron Microscopy (HREM)**  
Prof. Christos Lioutas  
Aristotle University of Thessaloniki, Greece
- 15.00 **Application of transmission electron microscopy in solving some  
problems of shape memory alloys**  
Prof. Danuta Stróż  
University of Silesia, Poland
- 16.00 Coffee Break
- 16.20 **Participants' presentations**
- 18.30 Departure from Hotel Lobby  
  
Sightseeing Tour of the City
- 20.30 Dinner at the hotel

**Thursday, July 12<sup>th</sup>, 2012**

**Third Session**

**Chairperson:** Dr. Maya Marinova

- 8.30 **Electron spectroscopy techniques for surface chemical analysis:  
XPS/AES/SAM**  
Prof. Panagiotis Patsalas  
University of Ioannina, Greece
- 10.30 Coffee Break
- 10.50 **Highly performing semiconductor quantum dots, towards  
commercialization in optoelectronics and photovoltaics**  
Dr. Alexandros Stavrinadis  
The Institute of Photonic Sciences, Spain
- 12.30 Lunch



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**Fourth Session**

**Chairperson:** Prof. Panagiotis Patsalas

- 13.30 **Micro- and nano-structural study of SiC, polytypes and stacking faults**  
Dr. Maya Marinova  
University of Paris-Sud, France
- 15.15 Departure from Hotel Lobby
- Excursion to the beaches of Chalkidiki  
Dinner by the sea

**Friday, July 13<sup>th</sup>, 2012**

**Fifth Session**

**Chairperson:** Prof. Christos Lioutas

- 8.30 **SEM, basics and applications**  
Dr. Lori Nalbandian  
Centre for Research and Technology Hellas, Greece
- 10.00 **AFM, basics and applications**  
Prof. Nikos Frangis  
Aristotle University of Thessaloniki, Greece
- 11.00 Coffee Break
- 11.20 **New techniques for nanocrystal structure determination by precession electron diffraction**  
Dr. Stavros Nicolopoulos  
NanoMEGAS, Belgium
- 13.00 Lunch
- 14.00 Departure from Hotel Lobby
- Experimental Work in the Electron Microscopy Laboratory of the  
Aristotle University of Thessaloniki**
- 20.30 Dinner at the hotel



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**Saturday, July 14<sup>th</sup>, 2012**

**Sixth Session**

**Chairperson:** Prof. Tomasz Goryczka

8.30 **Advanced Microscopy, new techniques**

Dr. Tetsuo Oikawa  
JEOL, Japan

10.45 Departure from Hotel Lobby

Excursion to the Archaeological Site of Vergina and Lunch

17.00 Coffee Break

**Seventh Session**

**Chairperson:** Prof. Danuta Stróż

17.20 **XRD for structural determination of materials, basics and applications**

Prof. Tomasz Goryczka  
University of Silesia, Poland

19.20 **Electron microscopy for high-tech materials and structures: examples  
of work**

Dr. Konstantinos P. Giannakopoulos  
National Centre for Scientific Research "Demokritos", Greece

21.00 Dinner at the hotel

**Sunday, July 15<sup>th</sup>, 2012**

**Eighth Session**

**Chairperson:** Prof. Patrick Soukiassian

8.30 **General introduction to European Funds**

Cécile Le Duc  
Lyon Ingénierie Projets, France

9.30 **Dislocations in solids**

Dr. Gabrielle Regula  
Aix-Marseille University, France

11.00 Coffee Break



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**11.20 Basic principles of optical investigation techniques**

Prof. Jean Camassel  
University of Montpellier 2, France

13.00 Lunch

**Ninth Session**

**Chairperson:** Prof. Jean Camassel

**14.00 Optical investigation of as-grown stacking faults in SiC samples**

Prof. Sandrine Juillaguet  
University of Montpellier 2, France

**15.30 SiC surfaces, interfaces and nanostructures: atomic structure,  
nanochemistry, and electronic & optical properties**

Prof. Patrick Soukiassian  
University of Paris-Sud, France

**17.00 Evaluation and Closing**

Organizing Committee Chairman Prof. Efstathios K. Polychroniadis  
Aristotle University of Thessaloniki, Greece

18.00 Departure from Hotel Lobby

Visit to the Church of St. Demetrius, patron saint of Thessaloniki (the byzantine  
basilica with its catacombs is part of the UNESCO World Heritage Site)

Goodbye Dinner

**Monday, July 16<sup>th</sup>, 2012**

Departure Day

