

Friday, 25.09.2020

10:00 Dr. N. Kardjilov

Applications of X-ray and neutron imaging in materials science and energy research

11:30 Coffee Break

12:00 Dr. N. Kardjilov

Applications of X-ray and neutron imaging in cultural heritage (Part 1)

13:00 Lunch

14:30 Dr. N. Kardjilov

Examples of data processing in X-ray and neutron imaging experiments (Part 2)

18:00 Dinner

Saturday, 26.09.2020

9:30 Prof. J. Banhart

Lecture: Use of 3D imaging processes for solving engineering problems

10:30 Coffee break

11:00 Workshop,

Chair: Prof. Myroslav Karpets
Organizers:

Dr. A. Dudka / Dr. Yu. Yaworski
Presentation of the master theses (5 min / topic) of 5-10 students. Discussion about the possible application of the tomography.

12:30 Dinner

13:30 Prof. J. Banhart

Opportunities for master's theses in materials science at German Universities and Research Centres

Panel discussion:

Science location Germany;
Cultural exchange between the two countries.

18:00 All participants

Closing ceremony and farewell party

Venue:

National Technical University of Ukraine "KPI" named after Igor Sikorsky

Київ, вул. Політехнічна, 35,
Інститут матеріалознавства та зварювання ім. Е.О. Патона
Навчальний корпус 9

Контакти для реєстрації КПІ,

Київ:

Dr. Олександр Дудка, e-mail:
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Dr. Юрій Яворський, e-mail: yar-
yura@ukr.net

Кінцевий термін реєстрації: 7.09.2020

Осіння школа фінасується: Deutscher Akademischer Austauschdienst (DAAD)

Autumn School in KPI, Kyiv 2020

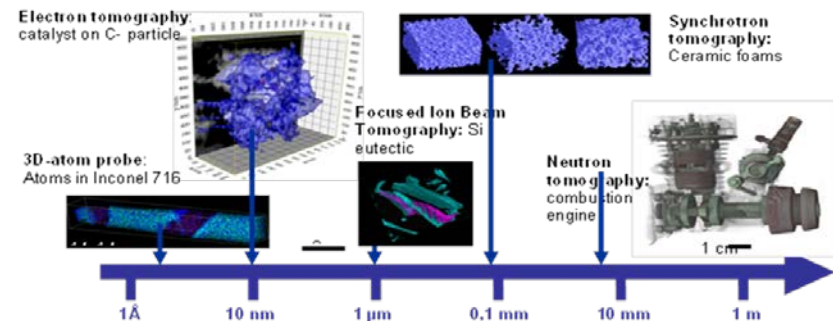
Осіння школа в КПІ, Київ 2020 21.09 - 26.09.2020

Introduction to modern analytical methods for characterizing the three-dimensional microstructure of materials

Ознайомлення із сучасними аналітичними методами характеристики тривимірної мікроструктури матеріалів

Program

Програма



Monday, 21.09.2020

9:00 Opening / Introduction

Director of IM & W named after E.O. Paton, Prof. Dr. Petro Loboda

Prof. Dr. Myroslav Karpets,
Chair of Metallurgy and Heat Treatment

Prof. Dr. Vladislav Masur, Chair for high-temperature materials and powder metallurgy

Dr. G. Zimmermann,
Dr. O. Schwaika, DAAD in Kiev,
Higher education in Germany

10:00 Prof. Dr. Banhart (TU Berlin)
Presentation of the program and the schedule.

10:30 Coffee break

10:45 Dr. N. Wanderka
Introduction into Atom Probe Tomography (APT)

13:30 Lunch

14:30 Dr. N. Wanderka, E. Zaiser
Reconstruction of the data sets and their analysis (Phase separation in Ni-base high- temperature alloys)

18:00 Dinner

Tuesday, 22.09.2020

10:00 Dr. N. Kardjilov
Introduction into X-ray and neutron imaging: Radiography(Part 1)

11:30 Coffee break

12:00 Dr. N. Kardjilov
Introduction into X-ray and neutron imaging: Tomography(Part 2)

13:00 Lunch

14:30 Dr. N. Kardjilov
Examples of data processing in X-ray and neutron imaging experiments

18:00 Dinner
Dinner together with traditional food and music

Wednesday, 23.09.2020

10:00 Prof. Dr. S. Matsumura
Recent Advancement in Three-dimensional Imaging of Metallic Nanoparticles by Electron Tomography

10:30 Coffee break

11:00 Dr. G. Melinte
Introduction into STEM, ADF und HAADF-Tomography (Theory)

13:30 Lunch

14:30 Dr. G. Melinte
Practical introduction to electron tomography data processing: CMK-3 porous carbon as test material.

18:00 Dinner

Thursday, 24.09.2020

10:00 Dr. N. Wanderka
Introduction into Focused Ion Beam (FIB) tomography

11:30 Coffee break

12:00 Dr. N. Wanderka
Creation of 3D images from prepared data (e.g. 3D tomography of Al-10Si-0.3Fe base alloys (intermetallic phases)

13:30 Lunch

14:30 Dr. N. Wanderka, E. Zaiser
Creation of 3D images of phases in high entropy alloy AlCrCoCuFeNi

18:00 Dinner
Common walk through Kiev

Institutions



involved: