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ACADEMIC CENTRE
FOR MATERIALS
AND NANOTECHNOLOGY AGH

OBJECTIVES

- To share multidisciplinary knowledge on nanomaterials and aerogels, from both academia and industry.
- To train early career investigators on the characterization techniques for nanomaterials and especially for aerogel.
- To raise awareness of the nanomaterials and aerogels applications in the scientific community and society.

REGISTRATION

Deadline for **registration**: **6th June 2021**

Abstract deadline: **31st May 2021**

Abstract decision: **4th June 2021**

(for more information, please contact Organization committee)

[Registration HERE](#)



LOCATION

On-line
MS Teams platform

TRAINING SCHOOL

***Advanced technologies for the
processing and characterization of
nanostructured materials***

5th - 7th July 2021

Web page address:

<https://sites.google.com/view/schoolagh2020>

CONTACTS

Organization Committee

E-mail: schoolagh2020@gmail.com

Phone: +48 12 617 52 30

TRAINEES

- 50 PhD students and Post-Docs researchers are encouraged to apply for a 5 min presentation.

COMMITTEES

Organizing Committee from AGH UST:

Urszula Stachewicz (Chair), Carlos A. García-González (University Santiago de Compostela, ES), Jerzy Sobczak, Joanna Karbowiczek, Sara Metwally, Joanna Knapczyk—Korcza, Daniel Ura, Piotr Szewczyk, Zuzanna Krysiak, Łukasz Kaniuk, Ewa Sroczyk, Katarzyna Berent, Dorota Lachowicz, Angelika Kmita

Scientific Committee:

From AGH UST:

Urszula Stachewicz, Jerzy Sobczak, Marek Przybylski, Dorota Lachowicz, Angelika Kmita, Katarzyna Berent

Gudrun Reichenauer (ZAE Bayern, DE), Falk Liebner (BOKU University of Natural Resources and Life Sciences, AT), Can Erkey (Koç University, TU), Carlos A. García-González (University Santiago de Compostela, ES), Matthias Koebel (EMPA, CH)

MONDAY

5th July 2021

09:00-09:20 Welcome—Head of ACMiN—Marek Przybylski

09:20-09:30 Welcome—Training School Organizer

Manufacturing, production (Chair: Urszula Stachewicz)

09:30-10:10 **Ultralight porous materials - Mg-based lotus-like structures (gasars)** Jerzy Sobczak (AGH UST)

10:10-10:40 **Advanced manufacturing of aerogel-based materials (I)** Renata Adami (University of Salerno)

10:40-11:00 **Break**

11:00-11:40 **Nanofiber-based Aerogels** Eyal Zussman
(Technion-Israel Institute of Technology)

11:40-12:00 **Round Table: Introduction to AERoGELS COST Action Activities** Alyne Lamy-Mendes

12:00-12:30 **Break**

12:30-13:00 **Aerogel composites with 2D materials**
Agnieszka Jastrzębska (Warsaw University of Technology)

13:00-13:30 **3D printing of aerogels** Matthias Koebel (EMPA, Swiss Federal Laboratories for Materials Science and Technology)

13:30-14:00 **Low-vacuum scanning electron microscopy (LV-SEM) to analyze non-conductive samples**
Katarzyna Berent (AGH UST)

14:00-14:15 **Break**

Session chair: Zuzanna Krysiak

14:15-17:00 **Rapid presentations 1**

TUESDAY

6th July 2021

Characterization techniques (Chair: Angelika Kmita)

09:00-09:30 **Surface Analysis by XPS** Mateusz Marzec (AGH UST)

09:30-10:00 **Surface analysis with Atomic Force Microscopy (AFM) and related methods**
Michał Szuwarzyński (AGH UST)

10:00-10:40 **Liquid State Low and High Resolution NMR for studying Porous Solids** Bányai István

10:40-11:00 **Break**

11:00-11:30 **Transmission Electron Microscopy: State of the Art and Emerging Trends** Oleksandr Kryshstal (AGH UST)

11:30-12:00 **Advanced manufacturing of aerogel-based materials(II)** Carlos A. García-González (Universidade de Santiago de Compostela)

12:00-12:30 **Break**

Session chair: Katarzyna Berent

12:30-13:00 **Quantitative characterization of material microstructure based on digital material representations** Grzegorz Brus (AGH UST)

13:00-13:20 **3D visualization of porous materials by FIB-SEM tomography** Joanna Karbowniczek (AGH UST)

13:20-13:40 **Round table: How to get the maximum impact of your research** Carlos A. García-González, Matthias Koebel

13:40-14:00 **Break**

Session chair: Łukasz Kaniuk

14:00-16:45 **Rapid presentations 2**

WEDNESDAY

7th July 2021

Characterization technique (Chair: Dorota Lachowicz)

09:00-09:40 **Raman and IR** Andreas Braeuer
(Friedrich-Alexander-Universität Erlangen-Nürnberg)

09:40-10:20 **Structural characterization of mesoporous materials via small-angle scattering and nitrogen adsorption** Cedric Gommès (University of Liège)

10:20-11:00 **X-ray spectroscopy of nanoparticles in solutions and composites** Marcin Sikora (AGH UST)

11:00-12:30 **Company presentations**
Thermulon - Sam Cryer
PIK-Instruments - Łukasz Remez
Quantum Design GmbH, Micro Materials, GeTec - Andreas Bergner
Anton Paar - Paweł Wojda

12:30-12:45 **Break**

12:45-13:15 **Methods and pitfalls in mechanical and thermal characterization of aerogels** Gudrun Reichenauer
(Bavarian Center for Applied Energy Research, ZAE Bayern)

Theory and modeling of the structure-property relationship of aerogels Ameya Rege
(German Aerospace Center)

13:45-14:10 **Round Table: Characterization future**

14:10-15:00 **Closing session and award announcement**

