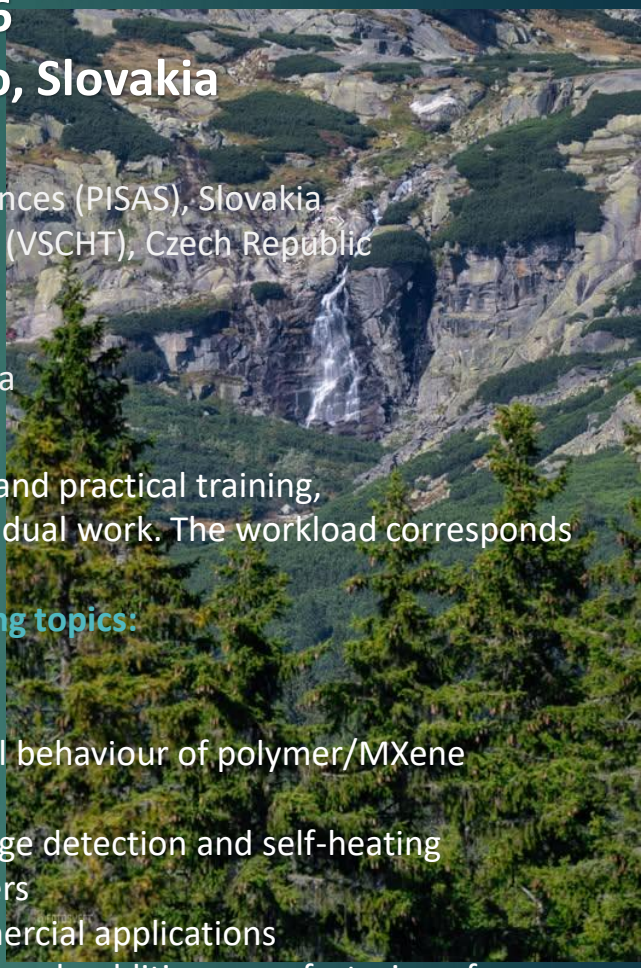
Training school
“MXene from fundamentals to functionality”
11-12 April, 2026
Hotel Patria, Štrbské pleso, Slovakia



The School is organised by:

Polymer Institute of the Slovak Academy of Sciences (PISAS), Slovakia
University of Chemistry and Technology, Prague (VSCHT), Czech Republic
Lulea University of Technology (LTU), Sweden
National Research Council (CNR), Italy
Kaunas University of Technology (KTU), Lithuania
University of Latvia (LU), Latvia

The course comprises 27 hours of academic and practical training, including a PhD pitch presentation and individual work. The workload corresponds to **1 ECTS** credit.

The School programme covered the following topics:

- Preparation of 2D nanomaterials
- Stability and wettability of MXenes
- Computational modelling of the mechanical behaviour of polymer/MXene nanocomposites
- MXene applications in strain sensing, damage detection and self-heating
- Recycling of carbon fibre reinforced polymers
- Polymers and polymer composites in commercial applications
- Structural monitoring and sensorisation through additive manufacturing of composite parts
- Other related advanced topics

Organising Committee:

Dr. Matej Mičušík (Chairperson)
Dr. Alfonso Martone
Prof. Daiva Zeleniakiene

Free registration (limit of 20 students) by email to

matej.micusik@savba.sk

Accomodation: Hotel Patria (email to recepcia@hotelpatria.sk and use code „MIRACLE“ (11-13.4. 2026); other hotels: hotelpanorama.sk, vilapolar.sk, sorea.sk/vysoke-tatry/hotel-sorea-trigan, shb.sk/shb etc.

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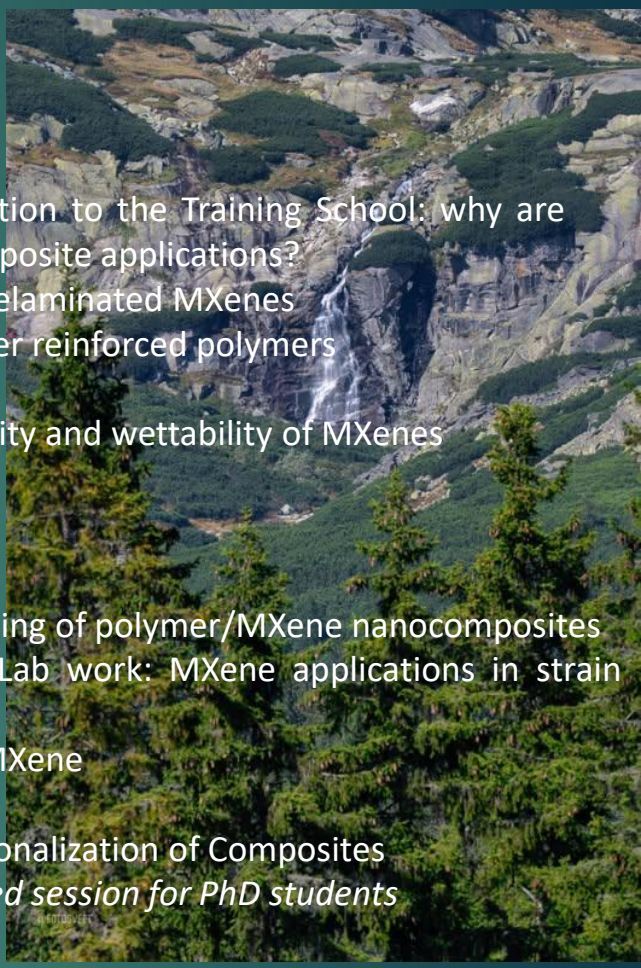

Program

Day 1 – Training school

15:30 Daiva Zeleniakienė (KTU) – Introduction to the Training School: why are MXenes important for structural composite applications?
16:00 A. Stepura (PISAS) – Synthesis of 2D delaminated MXenes
16:30 R. Joffe (LTU) - Recycling of carbon fiber reinforced polymers
17:00 Coffee break
17:30 M. Mičušík/P. Machata (PISAS) - Stability and wettability of MXenes
18:00 Discussion

Day 2 – Training school

9:30 S. Kilikevičius (KTU) – Computational modelling of polymer/MXene nanocomposites
10:00 G. Monastyreckis/D. Eidukynas (KTU) – Lab work: MXene applications in strain sensing
10:30 L. Sansone (CNR)– Green synthesis of 2D MXene
11:00 Coffee break
11:15 A. Martone (CNR) – Nanocomposite functionalization of Composites
11:45 *Five-Minute PhD Pitch Session (a fast-paced session for PhD students*
13:00 Lunch
14:00 Z. Sofer (VSCHT) - Preparation of 2D nanomaterials
14:30 F.M. Oliveira (VSCHT)- Synthesis of tubular MXenes using carbon fiber as a template
15:00-B. Wu (VSCHT) - Flux growth of large single crystals and their properties: from MAX phases to TMDs and derivatives
15:30 O. Bulderberga (LU) – From laboratory to industry: communicating MXene research effectively
16:00 SYNPO a.s. - Polymers and polymer composites in commercial applications
16:20 Coffee break
16:35 Julius Dombrauskis (UAB Stido) – Glass and carbon fiber reinforced polymers for commercial transport
17:05 E. Mantini (COMEC) - Structural monitoring and sensorisation
17:35 Discussions/ Interactive test