

Competition of Young Scientists

14.10.2025, CEMEA – meeting room 2.06, 1st floor to the right

09:00 Opening

09:05 Bryan Melo – Relativistic iterative linear damped response TDDFT solver for predicting X-ray absorption spectra of open-shell molecules

09:25 Leonardo F. Kleman - Synthesis and characterization of different BODIPY molecules, photophysical and computational studies

09:45 Ayesha Asbat - Styrene adsorption on pristine and modified smectites: A DFT-D3 approach for green applications

10:05 Daniela J. Raquejo – Bismuth-doped mesoporous bioactive glass nanoparticles with broad mesoporous distribution: physicochemical properties, bioactivity, and radiopacity

10:25 Ahmed G. Abd-Elstatar – Greener, safer, and stronger: plasma ion-exchanged pharmaceutical glass vials for precision drug delivery dosing

Break (10:45 – 11:00)

11:00 Asif Ali – Tailoring thermoelectric performance of stabilized high-entropy perovskite ceramics through Nb⁵⁺ substitution

11:20 Avnee Chauhan – High entropy oxide ceramic by pressure assisted sintering of multi-component rare-earth oxides

11:40 Jakub Michalík – Preparation and characterization of up-conversion materials with garnet structure in Al₂O₃-Y₂O₃-Yb₂O₃-Er₂O₃ system

12:00 Amol Logavi – Spectrally engineered and scalable SiO₂/ZnO antireflective coatings for high-efficiency and durable silicon solar cells

Lunch (12:20 – 12:50)

12:50 Vinny George - Surface-functionalised hydrogels incorporating organoclay-phloxine B films

13:10 Abel W. Ourgessa – From waste glass to high-value 3D porous glass ceramics: a sustainable additive manufacturing pathway

13:30 Parisa Shotorban – Smectite-based nanocomposites as a pH-responsive material for biomedical applications

13:50 Nariman Alipanah – 3D-printed hydrogel scaffolds with bioactive glass and antibacterial propolis-loaded ZIF-8 for tissue regeneration

14:20 Results

Committee:

doc. Ing. Zoltán Lenčేశ, PhD.

RNDr. Jana Madejová, DrSc.

Ing. Eva Scholtzová, PhD.

prof. RNDr. Pavol Šajgalík, DrSc.

prof. Ing. Marián Janek, PhD.