

Science Meetup MATUR 2025

January 28, 2025

Lecture hall UA4

09:30 – 10:00 Coffee break

10:00 – 11:30 Lecture block I.

MATERIALS FOR HIGH-TEMPERATURE TECHNOLOGIES IN THE ENERGY SECTOR

WILLI PABST

Temperature dependence of Young's modulus and thermal conductivity in thermal cycling of silica refractories for high-temperature thermal energy storage (HT-TES)

MILAN RACLAVSKÝ

Methodology and device for modeling dynamic stress of materials for high-temperature energy storage

LUBOMIR KRÁL

Thermodynamics and kinetics of hydriding and dehydriding reactions in chosen alloys LaNiSn

BEDŘICH SMETANA

Laboratory of thermal Analysis and Calorimetry - news

VLASTIMIL VODÁREK

Research activities of Department of Materials Engineering and Recycling

CHRISTOF SOMMITSCH

Research activities of TU Graz in the Frame of MATUR project

11:30 – 11:45 Break

11:45 – 13:15 Lecture block II.

MULTIFUNCTIONAL NANOSTRUCTURE MATERIALS AND TECHNOLOGIES

MARCIN BASIAGA

Modification and processing technology of polymer nanocomposite materials for biomedical applications.

JANA SEIDLEROVÁ

Surface modification of Ti-6Al-4V alloy using micro-arc oxidation and physical vapor deposition.

LUKÁŠ HALAGAČKA

Optical study of Silicon nanowire solar cells.

TIBOR FÖRDÖS

Topological and grating based laser structures for ultrafast data transfer.

KAMIL POSTAVA

Terahertz complete time domain spectroscopic ellipsometry and its applications.

13:15 – 14:00 Snack (banquet)

14:00 – 15:00 Laboratory visits

Laboratories of Department of Thermal Engineering and Department of Chemistry and Physico-Chemical Processes (building N)

Laboratories of Department of Materials Engineering and Recycling