PhD Students´ Day FMST 2024

When: 14.10. 2024, from 13:00

Where: VŠB-TUO, UA2 and UA5 rooms

Section 1   (room UA2)

- Metallurgical Technology
- Thermal Engineering and Fuels in Industry
- Chemical Metallurgy
- Chemical and Environmental Engineering
- Materials Science and Engineering

Committee:

prof. Ing. Vlastimil Matějka, Ph.D., prof. Equo Kobayashi

Ing. Josef Walek, Ph.D., doc. Ing. Marek Velička, Ph.D.

prof. Ing. Vlastimil Vodárek, CSc., doc. Ing. Kateřina Skotnicová, Ph.D.,

Time		Name	Paper
Study programme: Thermal Engineering and Fuels in Industry			
13:10	13:20	Jana Růžička	Application of multimetallic composites in FESS technology
13:20	13:30	Yesudass Arasappan	Mathematical simulation of pulverized coal combustion
Study programme: Metallurgical Technology			
13:30	13:40	Jiří Cupek	Effect of steel bath level in the tundish on flow characteristics
13:40	13:50	Matěj Geryk	Surface evaluation of models made by additive manufacturing with subsequent application for investment casting
13:50	14:00	Lucie Chudobová	Dilatometric study of phase transformations in steel
14:00	14:10	Šimon Kielar	Waste foundry sand: ecological challenge and industrial opportunities
14:10	14:20	Iryna Mykhailova	Research on the possibility of improving the quality of blast furnace coke
14:20	14:30	Lukáš Pavlásek	Analysis of inclusions in the aluminium melt released from the briquetted scrap
Study programme: Chemical Metallurgy			
14:30	14:40	Dalibor Novák	Modification of slag composition to reduce liquidus temperature and viscosity

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14:40	14:50	Martin Šarman	Vanadium pentoxide for supercapacitor applications

Study programme: Chemical and Environmental Engineering

14:50	15:00	Nikola Breksová	Possibilities of anaerobic co-fermentation of biowaste or energy biomass with waste or purposefully grown algae biomass
15:00	15:10	Tereza Motúzová	Monitoring of pesticides in the environment
15:10	15:20	Zuzana Pěgřimočová	The possibility of quantification of selected inorganic compounds by the nujol mull technique in the far-infrared spectroscopy
15:20	15:30	Rudolf Ricka	Titanium-immobilized layered HUS-7 Silicate as an efficient catalyst for photocatalytic reduction of carbon dioxide
15:30	**15:40**	**coffee break**	
15:40	15:50	Adéla Šlachtová	Powder TiO_2, CeO_2, Fe_2O_3 and CuO-based catalysts for catalytic oxidation of dichloromethane
15:50	16:00	Markéta Davidová	Electrically conducting composite from surfactant-montmorillonite nanocomposite

Study programme: Materials Science and Engineering

16:00	16:10	Marek Dobiáš	Measurement of fatigue crack growth rate on pressure vessel steel in hydrogen gas
16:10	16:20	Jan Kander	Hydrogen embrittlement evaluation by fracture mechanics approach
16:20	16:30	Łukasz Kantor	Calibration of the PVT hot zone model to crystal shape using carbon surface sticking coefficient
16:30	16:40	Renáta Palupčíková	Structural analysis of homogeneous welded joints of T24 steel after long-term creep exposure and simulation annealing
16:40	16:50	Klára Sklenaříková	Research of secondary utilization of 3D printing waste for production of honeycomb materials
16:50	17:00	Radek Tomášek	Charpy impact energy and fracture toughness correlaton of high-strength steels

BEST PRESENTATION AWARD

PhD Students´ Day FMST 2024

When: 14.10. 2024, from 13:00

Where: VŠB-TUO, UA2 and UA5 rooms

Section 2   (room UA5)

- Nanotechnology
- Management of Industrial Systems

Committee:

Ing. Tibor Fördös, Ph.D., Ing. Lukáš Halagačka, Ph.D.

Ing. Omar Ameir, Ph.D., Ing. David Vykydal, Ph.D., doc. Ing. Miroslav Mahdal, Ph.D.

Time		Name	Paper
Study programme: Nanotechnology			
13:10	13:20	Petr Běčák	Albumin stabilised metal clusters and potential use
13:20	13:30	Daniel Cvejn	Boron-doped g-C_3N_4
13:30	13:40	Pavel Czernek	Carbon coating on carbon fibers as promising surface modification for improved interfacial strength of polymer matrix and carbon fibers
13:40	13:50	Jiaming Liu	Optical function of mercury chloride from infrared range to Terahertz band
13:50	14:00	Vít Kubáň	Porous carbon nanomaterial for batteries
14:00	14:10	Gabriela Mikesková	Nanoparticles and their effects on the environment
14:10	14:20	Lukáš Plesník	Polymer nanocomposite separators for Li-ion batttery application
14:20	14:30	Sajjan Kumar Sathish	Nanocarbons in clay/polymer matrix for quasi solid state electrolytes
Study programme: Management of Industrial Systems			
14:30	14:40	Petr Havlíček	Enhanced surface defect detection with dual-wavelength laser and parallel image processing
14:40	14:50	Miloslav Bečka	Relationship between camera system and edge detection
14:50	15:00	Jan Dostál	Company digitalization using QR codes

15:00	15:10	Natálie Kawuloková	Artificial intelligence in marketing
15:10	15:20	Tomáš Kramný	The FMEA method – is it still the best for risk management?
15:20	15:30	Jan Pečman	Potentials of recuperation of kinetic energy of road vehicles using longitudinal terrain profile of roads
15:30	**15:40**	**coffee break**	
15:40	15:50	Lucie Vítková	Communication strategies in crisis management
15:50	16:00	Jiří Záruba	Transformation of AGVs in internal logistics of an industrial enterprise
16:00	16:10	Václav Zyder	Raw material resources in seemingly unusable waste for the day of Ph.D. Students 2024
16:10	16:20	Jingjing Duan	Analysis of corporate governance efficiency on new energy vehicle companies
16:20	16:30	Weixue Han	Age and overseas experience heterogeneity in TMTs: implications for corporate ESG performance
16:30	16:40	Abdul Razak Pakkeer Moideen	Navigating the legal landscape of higher education marketing
16:40	16:50	Matěj Hrouda	Assessment of the readiness of logistics processes in an industrial enterprise
16:50	17:00	Dagmar Špičková	Application of genetic algorithms to achieve optimal heating in industrial furnaces
17:00	17:10	Monika Sekaninová	Impact of data non-normality on process capability analysis

BEST PRESENTATION AWARD