Lívia Mačák

Date of birth: 27/04/1987

Nationality: Slovak

Gender: Female

CONTACT

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europass

ABOUT ME

I am a full-time 4th-year PhD student in Materials Engineering, with extensive experience in research, analysis, and characterization of materials. My professional activities include working with modern laboratory techniques and instruments, with a specialization in the characterization of optical, chemical, morphological, and structural properties of materials. I possess advanced skills in interpreting experimental data, including results from UV-Vis spectrophotometry, FTIR spectroscopy, transmission electron microscopy (TEM), and scanning electron microscopy (SEM). Additionally, I have experience with other analytical methods such as X-ray diffraction (XRD) and energy-dispersive X-ray spectroscopy (EDX). In my work, I focus on experiment design and implementation, data processing and evaluation, as well as preparing materials for scientific publications. I actively participate in research projects aimed at improving material properties and their potential applications. My knowledge and expertise are oriented toward achieving concrete results and finding practical solutions to research challenges.

H-Index (WoS): 4
vedecké publikácie (WoS): 8
ohlasy na publikácie (WoS): 52

WoS ID: GPK-4094-2022
ORCID ID:0000-0003-2350-7325
SCOPUS ID: 57782657500

WORK EXPERIENCE

01/03/2012 – 31/10/2015 Košice, Slovakia

Human resources assistant SK EXPRESS s.r.o.

• administration and management of tasks in the personnel department
• participation in the EU grant scheme Youth Employment Support and Employment Support for Disadvantaged Groups
• administrative processes associated with the activities of the personnel department

01/05/2016 – 31/08/2018 Košice, Slovakia

Projektová manažérka SIXNET internet technologies s.r.o.

• správa a manažment projektov spoločnosti
• participácia na grantovej schéme EÚ Kreatívny voucher a Kreatívny priemysel
• kominukácia a kontroling pracovného teamu

01/09/2021 – CURRENT Košice, Slovakia

PhD student Technical University of Košice, Faculty of Materials, Metallurgy and Recycling

The study and preparation of precious metal nanoparticles includes their synthesis and characterization using techniques such as UV-Vis spectrophotometry, TEM, SEM, and FTIR spectroscopy, in order to analyze their morphological, optical, and chemical properties.

Pedagogical activity

conducting exercises for subjects
1. Nanomaterials – practical exercises focused on the synthesis, characterization and applications of nanostructured materials.
2. Composite materials – laboratory exercises focused on the preparation, analysis and evaluation of the properties of composite materials.

2023: Nanomaterials I – co-author of a university textbook focused on theoretical and practical aspects of nanomaterials research and applications.

EDUCATION AND TRAINING

2021 – CURRENT Košice

Phd.- Materials Science Technical University of Košice, Faculty of Materials, Metallurgy and Recycling

2012 Košice, Slovakia

Ing.- Waste processing and recycling Technical University of Košice

PROJECTS

2022 – 2024

VEGA 1/0020/22 – Development and analysis of properties of progressive polymer matrix composites doped with silver nanoparticles for sensors and antibacterial applications

solver

2022 – 2024

009TUKE-4/2023 Creation of aids for materials engineering education using IT resources for Industry 4.0

člen riešiteľského kolektívu.

2025 – 2028

KEGA 011TUKE-4/2025: Modern Materials for Energy: Innovative Education for Enhancing the Quality of Teaching Materials Engineering Subjects (2025-2028)

LANGUAGE SKILLS

MOTHER TONGUE(S): Slovak

OTHER LANGUAGE(S): English