



Štefan Schwarz Support Fund

2023 Call 2023

Application number: 2023/OV1/016

Date of application: 29/09/2023

General information

Call	2023 2023 Call
Application number	2023/OV1/016
Date of submission	29/09/2023
Expected start date	01/01/2024
Application status	EvaluationProcess EN

Applicant details

Address (Mr., Mrs., Miss)	Ms.
Title before name	Mgr.
First name	Viktoriia
Family name	Kyshkarova
Title after name	PhD.

Institute of SAS

Visiting institute of SAS	Institute of Geotechnics SAS
Visiting institute of SAS contact	Ing. Slavomír Hredzák, PhD., hredzak@saske.sk, 055/7922600
Name of the responsible scientist	Inna Melnyk, PhD.

Completed scientific scholarships

List of completed scientific scholarships. Please note that the required length of research scholarships is at least 6 months

Scientific scholarships

Start date	01/02/2022
End date	01/05/2022
Duration in months	3
Name of faculty / institute	Faculty of Engineering, Department of Electrical&Electronics Engineering, Antalya Bilim University
Country	Turkey

Summary of internship results	Sol-gel method was used for the preparation of hybrid materials. The choice of synthesis conditions was aimed at achieving better selectivity towards various metal ions and organic dyes. The proposed approaches were used to create adsorptive composites with acidic groups based on silica and polymers (SiO ₂ styrene-acrylic copolymer (SAP). Also, a new method (freezing-thawing method) of preparing hydrogels for the removal of rare earth elements was studied during the intership. The results were presented at 8 conferences or seminars and the article is being prepared for publication.
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Start date	01/02/2023
End date	01/05/2023
Duration in months	3
Name of faculty / institute	Department of Inorganic Chemistry - Functional Materials, University of Vienna
Country	Austria
Summary of internship results	The main goal of the project was achieved by developing new materials containing carboxyl, phenyl and phosphonic groups capable of interacting with rare earth elements (REEs). Four new composites were prepared via a cost-effective sol-gel method. The materials were tested for their ability to remove rare earth elements, specifically Eu (III), from model aqueous solutions, and their kinetics and adsorption were investigated over a range of Eu (III) concentrations at pH 5.5. The results of the study were presented during the poster session at the "34. Deutsche Zeolith-Tagung" conference held at the University of Vienna in Austria on February 21-23, 2023. Various scientific seminars held at the university were attended during the course of the project. On April 26th, a presentation titled "One-Pot Synthesis of Silica Spherical Particles with Carboxyl Functionality and Their Application in REE Removal from Aqueous Solution" was given to report on the work done over the past three months. The results obtained are currently being analyzed and summarized for the purpose of preparing a manuscript.

Professional scientific profile

List of published works	List of published works.pdf (284KB)
List of responses	List of responses .pdf (300KB)
Participation in domestic and foreign projects	Participation in domestic and foreign projects.pdf (453KB)

Appearances at professional events and conferences	Appearances at professional events and conferences.pdf (232KB)
List of patents and patent applications	
Application of results	Application of results.pdf (424KB)

Confirmation of correctness / veracity of data

I confirm that the information and details provided, and other information relating to your formal application for fellowship, are correct. Yes

Mgr. Viktoriia Kyshkarova PhD.

Date: 29/09/2023

I understand that any false information or misrepresentation would result in the disqualification of my application or, if supported, could lead to its rejection without prior notice. Yes

Mgr. Viktoriia Kyshkarova PhD.

Date: 29/09/2023