



Networking for Research –
**German Universities of Applied Sciences and
Researchers from Central Asia**

Posterbook 2025

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Preface

It is a great pleasure for the Deutsche Forschungsgemeinschaft (DFG) to present this poster book prepared within the framework of the initiative **Networking for Research – German Universities of Applied Sciences and Researchers Worldwide**. This special initiative has been implemented in order to promote universities of applied sciences (UAS) building and strengthening their international research collaborations.

The booklet reflects the great interest and the strong participation of all the three research communities from Germany, Kazakhstan and Uzbekistan. The publication collects 234 posters submitted by experienced scientists as well as early career researchers, offering a rich overview of their research interests and their expertise. It serves as a valuable resource to initiate and expand scientific exchange, with the aim of fostering collaborative, knowledge-driven research across borders.

The poster book follows the structure of the three participating countries and the three thematic areas that have been chosen for this initiative with Central Asia. It is available in digital format only. We invite you to explore the posters, learn about the participating researchers and institutions, identify cooperation potential and make use of this opportunity for collaboration. We strongly encourage you to establish direct contacts by using the information provided on each poster.

The scientific interactions between the researchers and the institutions that follow from this booklet are science driven. The scientific exchange shall be guided by curiosity and the success of a future cooperation will be based on the motivation of the researchers themselves. The DFG will accompany this bottom-up process by holding further online meetings with regard to the respective research areas. We are confident that you will find inspiring ideas, potential research synergies, and new partners for future joint projects.

We wish you a fruitful and engaging exchange of ideas!

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Key Figures

This booklet presents a curated collection of 234 posters from 89 institutions across the three countries: Germany, Kazakhstan and Uzbekistan. It includes 44 contributions from 25 institutions in Germany, 91 contributions from 27 institutions in Kazakhstan, and 99 contributions from 37 institutions in Uzbekistan. All of them are dedicated to one or more of the three thematic areas that have been chosen for this initiative and reflect the great potential of knowledge-driven research in the natural and engineering sciences in these regions.



Digitalisation and Smart Technologies

Germany: 20 posters
Kazakhstan: 35 posters
Uzbekistan: 45 posters



Sustainable Urban Development and Smart Cities

Germany: 22 posters
Kazakhstan: 27 posters
Uzbekistan: 19 posters



Renewable Energy and Resource Management

Germany: 20 posters
Kazakhstan: 56 posters
Uzbekistan: 53 posters

Kazakhstan – Map of institutions and topics

04 | Astana

Astana IT University

Gumilyov Eurasian National University

Seifullin Kazakh Agrotechnical University

R&D Center "Kazakhstan Engineering" LLP
National Laboratory Astana, Nazarbayev University

Nazarbayev University

Digitalisation and Smart Technologies
Sustainable Urban Development and Smart Cities
Digitalisation and Smart Technologies
Sustainable Urban Development and Smart Cities
Renewable Energy and Resource Management
Digitalisation and Smart Technologies
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Digitalisation and Smart Technologies
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Sustainable Urban Development and Smart Cities
Renewable Energy and Resource Management

05 | Karaganda

Karaganda State University

Renewable Energy and Resource Management

06 | Pavlodar

Toraighyrov University

Sustainable Urban Development and Smart Cities

07 | Shymkent

Kuatbekov University of Peoples' Friendship
Auezov South Kazakhstan University

Renewable Energy and Resource Management
Digitalisation and Smart Technologies
Renewable Energy and Resource Management
Sustainable Urban Development and Smart Cities

08 | Taldykorgan

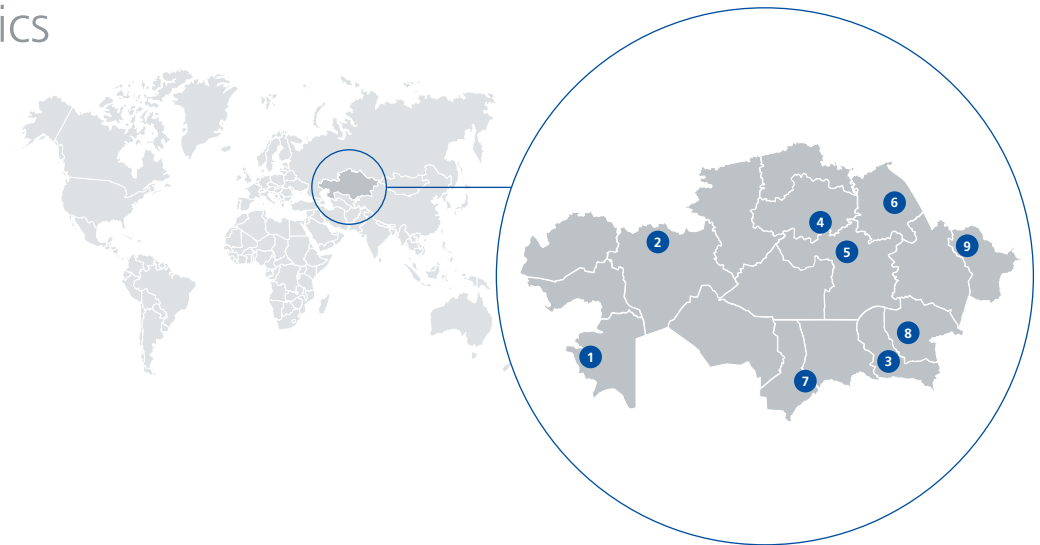
Zhetysu University

Digitalisation and Smart Technologies
Renewable Energy and Resource Management

09 | Ust-Kamenogorsk

Serikbayev East Kazakhstan Technical University

Digitalisation and Smart Technologies
Renewable Energy and Resource Management



Kazakhstan – Posters in alphabetical order by author

Contact Information

Name, Title	Bibol Ye. Zhakipbayev, PhD, Associate professor, Chief Researcher Engineering and Technological Hub
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Research Field, Expertise	Expert in silicate, construction, composite and thermal insulation materials; Expert in the field of integrated use of mineral raw materials in renewable resources. Participated in the 18th International Conference (Ibausil) on F.A. Finger - Institute for Building Material Science, Bauhaus-Universität Weimar (2012, Germany, Weimar); 2-week internship at the Technical University of Munich (2016, Germany, Munich).
Research Interests, Methods	Structure of raw materials, interdisciplinary scientific research, fractals; -----

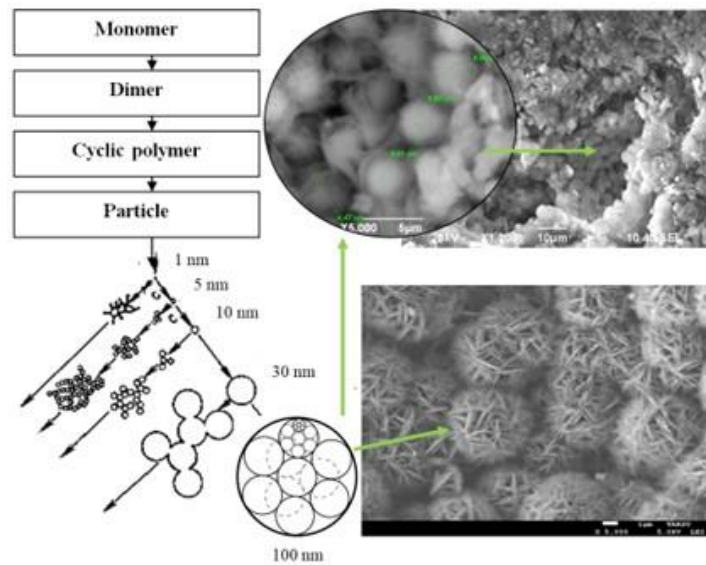
Ongoing Projects / Publications

The study was financially supported by the Committee of Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan as part of the scientific project "Innovative complex processing of mineral amorphous-siliceous raw materials with the production of wall thermal insulation material from it" 2023-2025.

- Zhakipbayev, B.Y.**, Alferyeva, Y.O., Ksenofontov, D.A. *et al.* An Experimental Study of the Possible Use of Opoka as a Si Source in Glass Production of the Turkestan Region, Kazakhstan. *Moscow University Geology Bulletin*. 76, **2021**. 398–406. <https://doi.org/10.3103/S0145875221040128>
- Smirnov P.V., **Zhakipbayev B.Ye.**, and etc. Diatomites and opoka from western Kazakhstan deposits: lithogeochemistry, structural and textural parameters, potential of use. *Bulletin of the Tomsk Polytechnic University, Geo Assets Engineering*, 334(№7), **2023**. 187-201. <https://doi.org/10.18799/24131830/2023/7/4046> Scopus (43%)
- Zhakipbayev B.Ye.**, Ismailova A.B., Tukhtamisheva A.Z., Seitkazinov O.D., Moldamuratov Zh.N. Energy efficiency and decarbonization of cement and foamed glass production through the use of natural active mineral additives (opoka and diatomite). *Nanotechnologies in Construction*. **2024**. 16(6): 587–600. <https://doi.org/10.15828/2075-8545-2024-16-6-587-600> Scopus (49%)
- Zhakipbayev B.**, Syrlybekkyzy S, Seidaliyeva L, Koishina A, Taizhanova L. Physicochemical Studies of Opoka as a Raw Material Component of Sodium Silicate Mixture for Subsequent Synthesis of Foam Glass Material Based on It. *Journal of Composites Science*. **2025**; 9(2):70. <https://doi.org/10.3390/jcs9020070> Scopus (Q1, 76%)
- B.Ye. Zhakipbayev**, N.K. Zhakiyev, B.Z. Abdikadyr, Zh.N. Moldamuratov, K.O. Abekov The Technology of Foam-Glass Building Materials for Heat-Insulating Purposes Using Amorphous-Silica Rocks. *ES Materials and Manufacturing*. **2025**. Volume 27: 1379 <https://dx.doi.org/10.30919/esmm1379> Scopus (Q1, 98%)

Ideas for Joint Research Projects

COMPREHENSIVE RESEARCH AND MANAGEMENT OF AMORPHOUS-SILICEOUS RAW MATERIALS FOR OBTAINING ENERGY-SAVING THERMAL INSULATION FOAM GLASS OF A WIDE RANGE



<https://www.espublisher.com/journals/article/details/1379>



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