



Denys Miroshnychenko

Date of birth: 14/08/1979 | **Place of birth:** Kharkiv, Ukraine | **Nationality:** Ukrainian |

Gender: Male | **Phone:** (+380) 508428358 (Mobile) | **Email address:**

Denys.Miroshnychenko@kmpi.edu.ua | **Website:**

<https://web.kpi.kharkov.ua/fuel/en/our-academic-teachers/denis-miroshnichenko/> |

Facebook: https://www.facebook.com/denis.miroshnichenko.2025?locale=uk_UA |

Whatsapp Messenger: +380508428358 | **Address:** Schchepkina, 14, 61161, Kharkiv, Ukraine (Home)

● ABOUT MYSELF

Professor and research leader in chemical technology of fuels with extensive experience in coal and carbon materials processing, energy efficiency, and environmental technologies. Author of 600+ publications, actively engaged in international research projects, industrial collaboration, and supervision of doctoral studies.

● EDUCATION & TRAINING

KHARKIV, UKRAINE

CORRESPONDING MEMBER- ENGINEERING ACADEMY OF UKRAINE

Recognition for significant scientific contributions in chemical technologies and engineering, particularly in fuel processing, coal and coke technologies, and development of carbon materials. Expertise in advancing applied research, innovation and industrial implementation of energy-efficient and environmentally sustainable technologies. Active participation in scientific coordination, expert evaluation, and development of national and international research initiatives; contribution to strengthening collaboration between academia, industry and research institutions.

Level in EQF: 8

KHARKIV, UKRAINE

PROFESSOR- STATE ENTERPRISE UKRAINIAN STATE RESEARCH INSTITUTE FOR CARBOCHEMISTRY

Advanced chemical technologies and engineering of fuels and lubricants; coal, lignite and coke processing technologies; thermochemical conversion (pyrolysis, carbonization) and development of functional carbon materials; bitumen modification and petrochemical processes; physicochemical characterization and quality assessment of fuels and coke; process modeling, optimization and scale-up for industrial applications; energy-efficient and low-carbon technologies; environmental engineering solutions including sorbents, waste valorization and soil/water remediation; academic teaching, supervision of PhD and DSc candidates, and scientific project management.

Level in EQF: 8

01/09/2015 - 30/08/2017 - KHARKIV, UKRAINE

DOCTOR OF TECHNICAL SCIENCES- STATE ENTERPRISE UKRAINIAN STATE RESEARCH INSTITUTE FOR CARBOCHEMISTRY

Chemical technologies and engineering (fuels and lubricants); coal, lignite and coke processing; pyrolysis and thermochemical conversion of solid fuels; development of carbon materials and bitumen modification technologies; physicochemical characterization and quality assessment of fuels and coke; process modeling and optimization; energy efficiency and industrial process implementation; environmental applications including sorbents, waste valorization and remediation technologies.

Level in EQF: 8

KHARKIV, UKRAINE

SENIOR RESEARCHER- STATE ENTERPRISE UKRAINIAN STATE RESEARCH INSTITUTE FOR CARBOCHEMISTRY

Advanced research in chemical technologies of fuels and carbon materials, including coal processing, coke production, and thermochemical conversion processes. Expertise in experimental design, physicochemical analysis, and interpretation of fuel and coke properties. Development and optimization of industrial technologies, process modeling, and scale-up. Experience in project management, supervision of research teams and postgraduate students, preparation of scientific publications and patents, and participation in national and international research projects.

Level in EQF: 8

31/12/2002 - 30/12/2005 - KHARKIV, UKRAINE

CANDIDATE OF TECHNICAL SCIENCES- STATE ENTERPRISE UKRAINIAN STATE RESEARCH INSTITUTE FOR CARBOCHEMISTRY

Fundamental and applied knowledge in chemical technologies of fuels and lubricants, including coal processing and coke quality optimization. Skills in experimental research, analysis of physicochemical properties of fuels, and evaluation of technological parameters of thermochemical processes. Competence in data processing, scientific writing, and presentation of research results. Ability to conduct independent research, develop technological solutions, and apply scientific methods to industrial and environmental challenges.

Level in EQF: 8

01/09/1996 - 15/02/2002 - KHARKIV, UKRAINE

MASTER'S DEGREE- NATIONAL TECHNICAL UNIVERSITY KHARKIV POLYTECHNIC INSTITUTE

Chemical technology and engineering with focus on fuel and carbon materials; fundamentals of coal and petroleum processing; basic thermochemical conversion processes; laboratory techniques and physicochemical analysis of fuels; process calculations and equipment fundamentals; data analysis and research methodology; preparation and presentation of scientific and technical reports.

Level in EQF: 7

● **WORK EXPERIENCE**

07/11/2017 - CURRENT - KHARKIV, UKRAINE

UNIVERSITY DEPARTMENT HEADNATIONAL TECHNICAL UNIVERSITY KHARKIV POLYTECHNIC INSTITUTE

Strategic and operational management of an academic department in chemical technologies and engineering; coordination of educational and research activities; curriculum development and quality assurance of higher education programs; supervision of academic staff and postgraduate students; leadership of scientific projects and international collaborations; resource planning and administration; strengthening industry partnerships and implementation of research results into practice.

07/11/2017 - CURRENT - KHARKIV, UKRAINE

RESEARCH MANAGERSTATE ENTERPRISE UKRAINIAN STATE RESEARCH INSTITUTE FOR CARBOCHEMISTRY

Management and coordination of scientific and R&D projects in chemical technologies and engineering; development of research strategies and work packages; budgeting, resource allocation and reporting; supervision of multidisciplinary research teams; proposal writing and grant acquisition (national and international); coordination of collaborations with academia and industry; monitoring project progress, risk management and ensuring compliance with scientific, technical and ethical standards; dissemination and commercialization of research results.

01/04/2009 - 06/11/2017 - KHARKIV, UKRAINE

CHEMISTRY LECTURER NATIONAL TECHNICAL UNIVERSITY KHARKIV POLYTECHNIC INSTITUTE

Teaching of chemistry and chemical technology disciplines (general, physical and fuel chemistry); preparation and delivery of lectures, laboratory and practical classes; development of teaching materials and curricula; supervision of student projects and laboratory work; application of modern teaching methods and digital tools; assessment of student performance; integration of research results into teaching; guidance of undergraduate and postgraduate students in scientific work.

11/01/2001 - KHARKIV, UKRAINE

RESEARCH ENGINEER STATE ENTERPRISE UKRAINIAN STATE RESEARCH INSTITUTE FOR CARBOCHEMISTRY

Applied research and engineering in chemical technologies of fuels and carbon materials; design and optimization of experimental setups and pilot processes; implementation of thermochemical conversion technologies (pyrolysis, carbonization); physicochemical analysis and testing of raw materials and products; data acquisition, modeling and process optimization; preparation of technical documentation and reports; support of technology transfer and industrial implementation; ensuring compliance with safety and quality standards.

● **PROJECTS**

01/01/2025 - CURRENT

Phytoremediation of war-induced heavy metal pollution in soils using humates from Ukrainian lignite, NATO "Approaches to reducing the impact of military activities on drinking water resources"

Development of an eco-friendly soil remediation technology based on lignite-derived humates to enhance phytoremediation of heavy metals (Pb, Cd, Cu, Ni). Includes laboratory and field studies, optimization of treatment methods, and selection of plant systems. Focus on sustainable, cost-effective solutions for post-conflict environmental recovery and soil restoration.

01/10/2025 - CURRENT

Modernizing Research Management and Industry Collaboration in Fuel and Energy Technologies at NTU "KhPI", THEA Ukraine Lead

Participation in an international capacity-building program aimed at strengthening leadership and management competencies in higher education. The project focuses on modernizing research management, improving university–industry collaboration, and implementing European best practices in governance, innovation, and academic development. Includes training modules, knowledge exchange with European institutions, and development of institutional strategies for enhancing research performance and internationalization.

01/10/2025 - CURRENT

Development of technology for phytoremediation of soils contaminated by military operations, using an innovative sorbent from lignite of Ukraine, VUIAS

Development of an innovative soil remediation technology combining phytoremediation with lignite-derived sorbents for removal and stabilization of heavy metals and toxic compounds in war-affected areas. The project includes material development, laboratory testing, and validation of plant–sorbent systems. Focus on sustainable, scalable solutions for environmental restoration, soil fertility recovery, and post-conflict green reconstruction.

01/01/2025 - CURRENT

Development of energy-efficient technology for blast furnace fuel production using domestic raw materials, Ministry of Education and Science of Ukraine

Development of an innovative energy-efficient technology for producing high-quality blast furnace coke from Ukrainian coal. The project integrates coal charge densification and dry quenching processes to improve fuel quality (CRI/CSR, strength) and recover waste heat. It includes comprehensive physicochemical characterization of coal, laboratory and industrial-scale studies, and process modeling. The technology is aimed at reducing dependence on imported raw materials, increasing energy efficiency, and supporting metallurgical and defense sectors. rite here the description

01/01/2026 - CURRENT

Mobile complex for processing hydrocarbon waste into fuel and functional materials for the Armed Forces of Ukraine, Ministry of Education and Science Of Ukraine Development of an energy-efficient mobile system based on low-temperature pyrolysis for conversion of mixed hydrocarbon waste into liquid fuels, gas, and functional carbon materials. The technology enables processing without complex sorting, ensures up to 90–95% energy efficiency, and provides energy autonomy. The project includes experimental research, process optimization, and creation of a pilot unit (TRL 6). Focus on circular economy, waste reduction, and decentralized energy supply in field conditions

01/01/2024 - CURRENT

Development of “green” technologies for the use of low-rank combustible minerals of Ukraine

Development of environmentally friendly technologies for the комплексне використання бурого вугілля та торфу with focus on production of water-soluble sorbents, modified bitumen, and biodegradable polymer materials. The project includes experimental studies, material characterization, and process optimization aimed at environmental remediation, infrastructure restoration, and circular economy solutions. Results target water purification from heavy metals, improved road materials, and eco-friendly polymers for sustainable applications

● **LANGUAGE SKILLS**

Mother tongue(s): **UKRAINIAN**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

● **HONOURS AND AWARDS**

01/03/2026 Kyiv School of Economics

Winner in KSE 150 Talents for Ukraine Recognized among the top Ukrainian professionals for outstanding contributions to science, innovation, and national development. Selected through a competitive process organized by the Kyiv School of Economics, highlighting leadership, research excellence, and impact in advancing sustainable technologies and industrial solutions.

31/08/2024 Ministry of Energy of Ukraine

Gratitude Official recognition for significant contributions to the development of the energy sector, scientific research, and implementation of innovative technologies.

01/10/2019 Department of Science and Education of Kharkiv Region Government Administration

Diploma Awarded in recognition of outstanding scientific achievements and contributions to education and research development in the Kharkiv region.

01/10/2018 President of Ukraine

Prize for young scientists Awarded for outstanding scientific achievements and significant contributions to the development of advanced technologies and research in Ukraine.

01/10/2010 Ministry of Industrial Policy of Ukraine

Diploma Awarded for significant contributions to industrial development, applied research, and advancement of technological solutions in Ukraine.

01/05/2010 Cabinet of Ministers of Ukraine

Award for special achievements of youth in the development of Ukraine Awarded for outstanding contributions to scientific research, innovation, and the advancement of national development.

- **SKILLS**

perform scientific research | report analysis results | research design | manage chemical testing procedures | collect samples for analysis | chemical processes | industrial research and development | engineering processes | project management | manage engineering project | manage university department | manage staff | discuss research proposals | manage research and development projects | perform project management | multidisciplinary research | scientific research methodology | assist students with equipment | write work-related reports | teach chemistry | write English