

Olga GRIGORYEVA
(Olga GRYGORYEVA)

Nationality: Ukrainian
Work address: Institute of Macromolecular Chemistry of the
National Academy of Sciences of Ukraine (IMC NASU),
Kharkivske shosse, 48, Kyiv 02160, Ukraine
Phone: +380 44 291 03 22 (office)
E-mails: grigoryevaolga@i.ua
Languages: English, Russian, Ukrainian



Education and academic degrees:

1981, M.D. Faculty of Chemical Technology, Technological Institute of Light Industry, Kyiv, Ukraine.
1984, Ph.D. Chemistry of Macromolecular Compounds. Institute of Macromolecular Chemistry, National Academy of Sciences of Ukraine. Title of Thesis: “Microphase separation at the formation of pseudo-interpenetrating polymer networks”.
2000 Academic rank Senior Researcher

Professional Experience:

1997-present *Senior Research Scientist*, head of the research group in the Department of thermostable polymers and nanocomposites, Institute of Macromolecular Chemistry, National Academy of Sciences of Ukraine.
1985-1997 *Research Scientist*, head of research group, Department of Interpenetrating Polymer Networks and Systems, Institute of Macromolecular Chemistry, National Academy of Sciences of Ukraine.
1984-1985 *Junior Research Scientist*, Department of Interpenetrating Polymer Networks and Systems, Institute of Macromolecular Chemistry, National Academy of Sciences of Ukraine.
1981-1984 *PhD student*, Department of Interpenetrating Polymer Networks and Systems, Institute of Macromolecular Chemistry, National Academy of Sciences of Ukraine.

Areas of Expertise:

- Development innovative technology for producing high-tech thermostable polymers and nanocomposites based on them, including nanocomposites with controlled electrical conductivity, by using different oligomers of heterocyclic esters and organic or inorganic nanofillers. The thermostable polymers and nanocomposites created can be used for aerospace applications; the high-tech materials created can work in a temperature range from $T \sim -250\text{ }^{\circ}\text{C}$ to $T \sim 350\text{ }^{\circ}\text{C}$.
- Development novel effective methods of *in situ* dispersing nanofillers in the oligomers of heterocyclic esters to create novel high-tech thermostable nanomaterials of suitable and controlled complex of physical chemical properties for aerospace applications.
- To develop high temperature resistant nanoporous films-forming materials based on linear polymers, densely crosslinked polymers, copolymers, interpenetrating polymer networks or hybrid organic-inorganic nanocomposites with dual nanoheterogeneity. These materials can be applied as thermostable filters, sorbents or membranes for separation of mixtures of liquids or gases, the high-tech materials created can work under extreme conditions.
- Development of novel solvent-free and high temperature resistant polymer nanostructured binder for high performance carbon and glass plastics, adhesives, coatings, potting resins for aerospace applications.

- Development of high performance technology of simultaneous recycling thermoplastics (HDPE, LDPE, PP) and elastomeric wastes (*i.e.* ground tire rubber) for producing Thermoplastic Elastomers which can be successfully reused, as example, for improving durability of road carpets, or as a part in formulations in manufacture of thermoplastic materials.
- Establishment of relationships between the conditions of synthesis of the high-tech thermostable or thermoplastic materials and nanomaterials and their morphology, thermal, electrical and others properties by using such methods as WAXS, SAXS, DMTA, DSC, MTDSC, DRS, electron microscopy, mechanical testing, etc.

Publications: The total number of publications – more than **475**, including **1 book** and **14 chapters** in books, as well as **> 150 papers**, **> 40 patents**, **> 270 communications and posters** at International and Ukrainian conferences.

Personal H-index (as of February 2023):

Scopus – 18, the number of citations - 949;

Google Scholar – 21, the number of citations - 1369.

Supervisor of one Ph.D. theses in specialty of Macromolecular Chemistry.

Scientific consultant of 7 Ph.D. theses in specialty of Macromolecular Chemistry.

Co-supervisor of 8 Master's degree in specialty of Macromolecular Chemistry.

Invited Scientist:

2021	CNRS-NASU Joint Project, International Associated Laboratory (LIA), Fellowship, University Paris East, Institut de Chimie et des Matériaux Paris-Est, Thiais, France (3 weeks).
2019	CNRS-NASU Joint Project, International Associated Laboratory (LIA), Fellowship, University Paris East, Institut de Chimie et des Matériaux Paris-Est, Thiais, France (3 weeks).
2019	CNRS-NASU Joint Project, International Associated Laboratory (LIA), Fellowship, Ingénierie des Matériaux Polymères (IMP), Université Lyon 1, Lyon, France (1 week).
2018	Stipend of Government of France for scientist with extensive experience, Institute National des Sciences Appliquées (INSA) de Rouen Normandie, France, (1 month).
2018	CNRS-NASU Joint Project, International Associated Laboratory (LIA), Fellowship, Institut de Chimie et des Matériaux Paris-Est, Thiais, France (1 month).
2017	CNRS-NASU Joint Project, International Associated Laboratory (LIA), Fellowship, Institut de Chimie et des Matériaux Paris-Est, Thiais, France (1 month).
2017	Horizon 2020 (€U), AERO-UA project, E-MRS Fall Meeting, Warsaw, Poland (1 week).
2015	CNRS-NASU Joint Project, Fellowship, Institut de Chimie et des Matériaux Paris-Est, Thiais, France (2 weeks).
2013	CNRS-NASU Project of Cooperation, PICS, Fellowship, INSA Université de Rouen, Laboratoire «Etude et Caractérisation des Composés Amorphes et des Polymères», Rouen, France (2 weeks).
2013	CNRS-NASU Project of Cooperation, PICS, Fellowship, Institut de Chimie et des Matériaux Paris-Est, Thiais, France (2 weeks).
2013	TUBITAK-NASU Joint Project, Fellowship, Ege University, Faculty of Engineering, Department of Civil Engineering, Transportation Division, Bornova/İzmir, Turkey (3 weeks).
2011-2012	Universidade Federal do Rio de Janeiro, Instituto de Macromoléculas, Rio de Janeiro, Brasil (12 months).
2011	CNRS-NASU Project of Cooperation, PICS, Fellowship, Institut de Chimie et des Matériaux Paris-Est, Thiais, France (3 weeks).

2011	CNRS-NASU Project of Cooperation, PICS, Fellowship, LECAP Laboratory, Rouen University, France (2 weeks).
2009	The Royal Society Joint Project, Fellowship, Chemical Engineering, Polymer & Composite Engineering Group, Imperial College of London, UK (1 month).
2008	The Royal Society Joint Project, Fellowship, Chemical Engineering, Polymer & Composite Engineering Group, Imperial College of London, UK (1 month).
2006	The Royal Society Fellowship, Chemical Engineering, Polymer & Composite Engineering Group, Imperial College of London, UK (2 months).
2004	CNRS-NASU Joint Project, Fellowship, Department of Polymer Investigations, Université Paris XII, Paris, France (3 weeks).
2004	STCU Joint Project, Fellowship, National Technical University of Athens, Department of Physics, Athens, Greece (1 month);
2004	NATO Fellowships, National Technical University, Department of Physics, Athens, Greece (2 months).
2001	NATO Fellowship, National Technical University, Department of Physics, Athens, Greece (2 months).
1999	NATO-ASI grant, University of Minho, Portugal (2 weeks).
1999	Contract, Fraunhofer Institut Zuverlässigkeit und Mikrointegration, Außenstelle Polymermaterialien und Composite, Teltow, Germany (6 months).
1998	The Royal Society Fellowship, Institute of Polymer Technology & Materials Engineering at Loughborough University, Loughborough, UK (3 months)
1997	INTAS Network Grant, National Technical University, Department of Physics, Athens, Greece (1 week).
1997-1998	INCO-Copernicus Program, Contract, Institute for Composite Materials at University of Kaiserslautern, Kaiserslautern, Germany (5 months).

Leading Scientist in the international research projects:

- 2022-2026.** French (CNRS) – Ukrainian (NASU) International Research Project: “*High-Temperature Resistant Polymeric Materials Based on Synthetic and Natural Phenols*”.
- 2017-2021.** France (CNRS)–Ukraine (NASU) Project: International Associated Laboratory (LIA): “*Nanoporous Thermostable Polymer Materials*”.
- 2016-2019.** Horizon 2020 (€U), AERO-UA project: “*Strategic and targeted support for Europe-Ukraine collaboration in aviation research*”.
- 2014-2015.** France (CNRS)–Ukraine (NASU) Project of Cooperation No 26199: “*Novel nanoporous polycyanurate materials using ionic liquids as porogen*”.
- 2011-2013.** France (CNRS)–Ukraine (NASU) Project of Cooperation, PICS No 5700: “*Novel thermostable nanoporous films based on polycyanurates for membrane and low permittivity materials*”.
- 2011-2013.** Turkish (TUBITAK)–Ukraine (NASU) Project of Cooperation No 110M400: “*Modification of bitumen by recycled post-consumer thermoplastics (polyethylene, polypropylene) with surface activated using physical and chemical approaches*”.
- 2009-2011.** STCU Project No 4599 (EU-Ukraine): “*Radiation-chemical modification of concrete for durability improvement in constructions working in extremal conditions*”.
- 2008-2009.** France (CNRS)–Ukraine (NASU) Project of Cooperation No 21294: “*Comparative investigation of different methods for engineering porous polycyanurate thermosets*”.
- 2008-2009.** The Royal Society Joint Grant (UK-Ukraine): “*Highly porous highly thermostable polymer foams from crosslinked polycyanurates*”.
- 2006-2009.** STCU Project No 3569 (USA-Ukraine): “*Micro- and macro-reinforcement of asphalt concrete pavement with fibrous materials made in Ukraine and their waste*”.

11. **2006-2007.** *ECONET Project* (Egide, France-Ukraine): “*Matériaux Composites Nanostructurés Intelligents*”.
12. **2006-2007.** France (CNRS)–Ukraine (NASU) Project of Cooperation No 18973: “*New thermostable track membranes obtained on the base of thin polycyanurate films*”.
13. **2006-2007.** France (CNRS)–Ukraine (NASU) Project of Cooperation No 18969: “*Application of principle of IPNs, dynamic vulcanization and irradiation for compatibilization and reuse of polyethylene/rubber waste*”. Principal Investigator of the Ukrainian team.
14. **2004-2005.** France (CNRS)–Ukraine (NASU) Project of Cooperation No 16813: “*Development of new thermally-stable membranes from polycyanurate-containing single networks and Interpenetrating Polymer Networks*”.
15. **2003-2006.** STCU Project No 3009 (EU–Ukraine): “*Application of principle of IPNs, dynamic vulcanization and irradiation for compatibilization and reuse of polyethylene/rubber waste*”.
16. **2001-2003.** INCO-Copernicus Program, Contract EU No ICA2-CT-2001-10003: “*Recycling of crumb rubber and polyolefin wastes by producing thermoplastic elastomers*”.
17. **1998-1999.** INTAS-network Project, EU–Ukraine, No 97-1936: “*Polymers and Composites for Advanced Technologies*”.

Leading Scientist in some recent national projects:

1. **2021-2025.** Target Complex Program of Scientific Research of NASU “Scientific and technical problems of monitoring of state, evaluation and extension of lifetime of long-term structures, equipment and buildings” („Lifetime-3”): “*Development of scientific principles and effective technologies for creation and use of resource-saving modifiers based on polymer waste structured by MWCNTs, waste from heat and energy-generating enterprises, fly ash, as an additional filler to increase the operational characteristics and resource of cement and asphalt concretes.*”
2. **2016-2020.** Target Complex Program of Scientific Research of NASU “Reliability and durability of materials, structures, equipment and facilities” („Lifetime-2”): “*Extension of service life of road surface by using thermoplastic elastomers based on waste polymers of different nature as modifiers for bitumen and asphalt.*”
3. **2019.** Target Program of Scientific Research of NASU “New functional compounds and materials of chemical production” within Budget Program “Support of the development of priority areas of scientific research”: “*Development of novel high temperature resistant nano-structured binders for carbon fiber reinforced composites for aviation industry based on bisphthalonitrile of domestic production*”.
4. **2013-2015.** Target Complex Program of Scientific Research of NASU “Problems of lifetime and exploitation security of constructions, buildings and machines” („Lifetime-1”): “*Development of effective methods of life cycle extension for bridges and building constructions using chemical and radiation-chemical modification of concretes*”.
5. **2010-2014.** State Target R&D Program “Nanotechnologies and nanomaterials” NASU, Ukraine: “*Development of nanotechnology of producing hybrid organic-inorganic composite nanomaterials of high thermal stability, adhesion strength and low dielectric loss for elements used in aerospace and electronics*”.