Associate Professor Nina Kaneva

Sofia University “St. Kliment Ohridski,

Faculty of Chemistry and Pharmacy

Department : Inorganic Chemistry

Room: 207, Laboratory: 329

1164 Sofia, 1 James Bourchier Blvd., Bulgaria

Tel: +359 2 8161 321

e-mail: nina_k@abv.bg, nhnk@chem.uni-sofia.bg

SCOPUS ID: 26435301500

ORCID ID : https://orcid.org/0000-0002-2010-7118

https://www.researchgate.net/profile/Nina-Kaneva/research

Education

2016 – Ph.D. in Chemical science 4.2. Chemical science (Inorganic Chemistry), Dissertation topic: "Synthesis and characterization of pure and modified nanosized ZnO for photocatalytic applications"

2012 – Master's degree "Medicinal Chemistry", SU "St. Kliment Ohridski", Faculty of Chemistry and Pharmacy, Diploma Thesis: "Photocatalytic water purification from pharmaceutical pollutants"

2011 – Bachelor of "Computer Chemistry", "Teacher of Chemistry", SU "St. Kliment Ohridski", Faculty of Chemistry, Diploma thesis: "Nanostructured ZnO thin films for photocatalytic applications".

Professional Development

2022 – Associate Professor, Department of Inorganic Chemistry, FHF of the University of St. Cl. Ohrid"

2015 - 2021 – Teacher of Chemistry and Environmental Protection, National Science and Mathematics High School "Acad. L. Chakalov", Sofia

2016 - Assistant Professor, Department of Inorganic Chemistry, FHF of SU "St. Kliment Ohridski"

2015 - Assistant, Department of Inorganic Chemistry, FHF of SU "St. Cl. Ohrid"

2011-2012 – Specialist chemist, Institute of Molecular Biology, BAS - Investigation of the biocompatibility of ZnO films with endothelial and hepatocellular cells (Hep G2, EA), transplantation of cancer cells and determination of their survival, synthesis of hydrogels, isolation of DNA, RNA and proteins

Additional academic positions, awards and visiting professorships:

2022 - L'Oréal and UNESCO "National Scholarship Program For Women in Science" winner with the project "Purification of waters from pharmaceutical drugs"

2017 - Winner of the honorary award named after Prof. Dr. Yanko Dimitriev (HTMU, Department of "Silicate Technology") for scientific achievements of doctoral students and young scientists in the field of materials science, chemical technologies and nanocomposite materials

2011 - Winner of a diploma for high achievements in the field of science and successful presentation of the SU "St. Kliment Ohridski" in international events, (Annual Alma Mater Awards)

2011 - Winner of the Eureka Foundation scholarship for a young scientist named after Rostislav Kaishev - Department of Chemistry

2010 - Winner of a diploma for high achievements in the field of science and successful presentation of the SU "St. Kliment Ohridski" in international events, (Annual Alma Mater Awards)

Specializations and research stays abroad:

November 2009 - Specialization in Japan for 1 month, work topic: Synthesis and characterization of ZnSe quantum dots. Saitama University, Department of Chemistry, Saitama, Japan. (Host: Prof. Seiichiro Nakabayashi)

October 2008 – Specialization in Prague (course – Preparative Inorganic Chemistry) for 1 week, Charles University, Department of Inorganic Chemistry. Faculty of Science. (Host: Assoc. Prof. David Havlicek)

June 2011 – Specialization in Israel (Bar-Ilan University) for 1 week.

Scientific interests

- heterogeneous photocatalysis for the purification of waters from organic dyes and pharmaceutical drugs
- synthesis and characterization of semiconductor catalysts (particles, powders, films)

- photofixation of co-catalysts on the surface of semiconductor materials
- formation of natural polymers (helical structures) and their composition on solid surfaces (ZnO, TiO_2 nanoparticles)

Selected publications (up to 5)

Dobrina Ivanova, Ralitsa Mladenova , Hristo Kolev , **Nina Kaneva**, „Effect of Ultraviolet Illumination at the Photo-Fixed of Silver Ions in the Zinc Oxide Films“, Catalysts, 2023, (7), 1121,

N. Kaneva, A.Bojinova, K. Papazova, “Enhanced Removal of Organic Dyes Using Co-Catalytic

Ag-Modified ZnO and TiO2 Sol-Gel Photocatalysts”, Catalysts, 2023, 13, 245.

Nina Kaneva, Assya Bojinova, Karolina Papazova, Dimitre Dimitrov, Katerina Zaharieva, Zara Cherkezova-Zheleva, Alexander Eliyas, “Effect of thermal and mechano-chemical activation on the photocatalytic efficiency of ZnO for drugs degradation”, Archives of Pharmacal Research, 39 (2016), 1418-1425.

N. Kaneva, A. Bojinova, K. Papazova, D. Dimitrov, “Photocatalytic Purification of Dye Contaminated Sea Water by Lanthanide (La3+, Ce3+, Eu3+) modified ZnO”, Catalysis Today, 252 (2015), 113-119.

P. Georgiev, **N. Kaneva**, A. Bojinova, K. Papazova, K. Mircheva, K. Balashev, “Effect of gold nanoparticles on the photocatalytic efficiency of ZnO films”, Colloids and Surfaces A: Physicochemical and Engineering Aspects, 460 (2014), 240-247.

Project activity – (research projects in the last 5 years)

2023 - SU "St. Kliment Ohridski", ""Atomic absorption determination of residual silver in aqueous solutions of dyes after photocatalysis with modified TiO2 films", team member

2021 - 2024, "FUNDING COMPETITION FOR FUNDAMENTAL SCIENTIFIC RESEARCH - 2021" , "Photocatalytic activity of selectively photofixed cocatalyst thin films," member of the collective

2017-2019 - "Support for the development of doctoral students, postdoctoral fellows, specialists and young scientists", BG05M2OP001-2.009-0028, "Achieving an optimal environment for training, research, innovation and sustainable development of human capital in the field of chemical sciences: Adaptation of education today for tomorrow, member of the collective.

2018 - Competition for projects under bilateral cooperation programs 2018 Bulgaria - Russia, Modified ZnO, M/ZnO and MxOy/ZnO catalysts for photocatalytic water purification from organic and inorganic pollutants and CO oxidation, team member.

2014-2018 - Fundamental research, New solar-activated nanoscale semiconductor materials with enhanced efficiency in photocatalytic and advanced oxidation processes, collective member

Other scientific activities

2011 – Member of the Bulgarian Catalytic Society (Institute of Catalysis, Bulgarian Academy of Sciences)

2007 – Member of the Laboratory of Science and Technology of Nanoparticles group, Department of General and Inorganic Chemistry, Faculty of Chemistry and Pharmacy, Sofia University

Teaching activity

Lectures on "General and Inorganic Chemistry" - specializations of BF (Molecular Biology, Ecology and Environmental Protection) - RO

Lectures on "General and Inorganic Chemistry" - specialty of Faculty of Science (Biotechnologies) - ZO

Seminars and exercises in "General and inorganic chemistry" and "Chemistry of elements" - all specialties of FHF and BF, RO and ZO.

Educational practice in "Inorganic Chemistry" - specialty of FHF (Chemistry)