

Curriculum Vitae



Nina Danchova

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SCIENTIFIC AND RESEARCH INTERESTS: Sol-gel chemistry; Thermal conductivity; Optical and Luminescent Spectroscopy; Materials Science (aerogels, hybrid, composite, insulating, and luminescent materials)

PERSONAL INFORMATION

Name: Nina Georgieva Danchova

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Nationality: Bulgarian

WORK EXPERIENCE

• Dates (from-to):

- ✓ **November 2012 – Present:** Chief Assistant Professor, Dept. of Physical Chemistry, Faculty of Chemistry and Pharmacy, Sofia University "St. Kliment Ohridski", Sofia
- ✓ **2011 – 2012:** Researcher for the EFFiHEAT project, R&D Division, Sofia University "St. Kliment Ohridski", Sofia
- ✓ **2008 – 2011:** Laboratory Chemist, Dept. of Physical Chemistry, Faculty of Chemistry and Pharmacy, Sofia University "St. Kliment Ohridski", Sofia

EDUCATION AND TRAINING

Graduated all levels of education with top honors. Awarded as the valedictorian in both secondary and higher education (bachelor's and master's degrees)

- ✓ **1999 – 2003:**
Professional High School of Electronics and Chemical Technologies “Prof. Assen Zlatarov”, Pleven, Bulgaria. Specialization: Technological and Microbiological Control
- ✓ **2003 – 2007:**
Bachelor's Degree, Faculty of Chemistry, Sofia University "St. Kliment Ohridski", Sofia, Bulgaria. Specialization: Chemistry and Physics
- ✓ **2007 – 2008:**
Master's Degree in Materials Science, Faculty of Chemistry, Sofia University "St. Kliment Ohridski"
- ✓ **February 2009 – April 2012:**
PhD student in Physical Chemistry, Faculty of Chemistry and Pharmacy, Sofia University "St. Kliment Ohridski", Sofia

✓ **April 19, 2012 - PhD in Physical Chemistry**

PhD thesis : "Preparation and Properties of Doped Sol-Gel Materials"

Supervisor: Assoc. Prof. Dr. Stoyan Ivanov Gutzov

PERSONAL SKILLS AND COMPETENCIES

Teaching skills, pedagogical approach, chemical laboratory skills; physicochemical methods; sol-gel chemistry; optical and hybrid materials; thermal insulation materials; optical and luminescent spectroscopy

Native language: Bulgarian

Other languages: English

- Reading: Excellent
- Writing: Very good
- Speaking: Very good

PATENTS

Patent (Patent Office of the Republic of Bulgaria), Reg. No. 66929 B1/2019, Hybrid Anisotropic Micronetwork

Owner: Sofia University "St. Kliment Ohridski"

Inventors: S. Gutzov, **N. Danchova**, R. Tsekov, I. Barreno, X. Ruiz Del Portal, J. Ulbikas

KEY SCIENTIFIC PUBLICATIONS

1. **N. Petkova**, S. Dlugocz, S. Gutzov, Preparation and optical properties of transparent zirconia sol-gel materials, Journal of Non-Crystalline Solids 357 (2011) 1547-1551.

<http://dx.doi.org/10.1016/j.jnoncrysol.2010.12.012>

2. **N. Danchova**, S. Gutzov, Time evolution of samarium doped silica sol–gel materials followed by optical spectroscopy, *J Sol-Gel Sci Technol* 66 (2013) 248–252.
<https://doi.org/10.1007/s10971-013-3001-1>
3. **N. Danchova** and S. Gutzov, [Functionalization of Sol-Gel Zirconia Composites with Europium Complexes](#), *Z. Naturforsch.* 69b (2014) 224–230. DOI: 10.5560/ZNB.2014-3261.
4. Jolanta Doneliene, Egle Fataraitė-Urbonienė, Matas Rudzikas, Saulius Pakalka, **Nina Danchova** and Juras Ulbikas, Effect of Precursor Nature and Sol-Gel Synthesis Conditions on TiO₂ Aerogel's Structure, *Molecules* 2021, 26, 5090,
<https://doi.org/10.3390/molecules26165090>
5. **N. Danchova**, R. Tsekov, D. Shandurkov, S. Gutzov, L. Lyubenov, L. Mihaylov, T. Spassov, Silica gels doped with gold nanoparticles and gold thiolate complexes: The effect of heating and preparation conditions, *Journal of Non-Crystalline Solids*, Volume 648, 15 January 2025, <https://doi.org/10.1016/j.jnoncrysol.2024.123308>

CITATIONS

Over 275 citations in specialized scientific literature; h-index = 10 (Scopus).

CONFERENCE PARTICIPATIONS

Participated in over 30 international and national conferences with posters and oral presentations.

REVIEWER IN INTERNATIONAL SCIENTIFIC JOURNALS

- **Gels** (MDPI), IF 5.04; SJR: 0.674
- **Applied Sciences** (MDPI), IF 2.5; SJR 0.508

Guest Editor of the Special Issue “Advances in Gel Materials: Synthesis, Characterization, and Applications” in **Molecules** (MDPI).

TEACHING ACTIVITIES

- ✓ Lecturer on Physical Chemistry (BSc degree), Faculty of Physics, Sofia University
- ✓ Lecturer on Ceramic Materials for master's programs DSKT and FM, Faculty of Chemistry and Pharmacy, Sofia University (MSc degree)
- ✓ Lecturer on Optical Materials (elective course), Faculty of Chemistry and Pharmacy, Sofia University (BSc degree)
- ✓ Laboratory exercises and seminars on Physical Chemistry I and II , Faculty of Chemistry and Faculty of Biology, Sofia University (BSc degree)
- ✓ Laboratory exercises on Ceramic Materials (MSc degree), Faculty of Chemistry and Pharmacy, Sofia University