CURRICULUM VITAE

Natalya A. VODOLAZKAYA
(**Nataliia VODOLAZKA** translation from Ukrainian)
PhD in Physical Chemistry (2002)
Doctor of Science (2012)
Full Professor in the Department of Physical Chemistry
Date and place of birth:
25 December, 1975 Tapa, Estonia

Professional address: Chemical Faculty, Department of Physical Chemistry,
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Academic degrees and titles

1998	Master of Science in Chemistry Chemical Faculty, Kharkov State University, UKRAINE. Diploma with Honor
2002	PhD in Physical Chemistry or Scientific Degree of Candidate of Chemical Sciences in Speciality – Physical Chemistry
2006	Master of Science in Psychology (second higher education). Psychology Faculty, V.N. Karazin Kharkov National University, UKRAINE. Diploma with Honor
2000 – 2007	Lecturer in Physical and Colloidal Chemistry and Senior Staff Scientist, V.N. Karazin Kharkov National University
2005 – 2009	Assistant Professor in Physical Chemistry
2008	Invited Lecturer at the University of Nancy 1 – Henri Poincare, Nancy, FRANCE
2009	Guest Researcher at the LCPME of the University of Nancy 1 – Henri Poincare, Nancy, FRANCE
20 October 2011	Presentation of the Thesis for the Doctor of Science Degree: Speciality – Physical Chemistry
17 February 2012	It was given Doctor of Science Degree in Speciality – Physical Chemistry
2013	Guest Researcher at the LCPME of the University of Lorraine (Henri Poincare, Nancy 1), Nancy, FRANCE (Grant of Ministry of Education and Science, Youth and Sport of Ukraine)
2017	Guest Researcher at the LCPME of the University of Lorraine, Nancy, FRANCE
2018	Guest Researcher, Aston University, Birmingham, UK (Erasmus +)

2019	Guest Researcher, Aston University, Birmingham, UK (Erasmus +)
2021	Guest Researcher at the LCPME of the University of Lorraine, Nancy, FRANCE
Current	Full Professor in the Department of Physical Chemistry

h-index 16

Some of Publications (2017 – 2022)

2022	Obukhova O. M., Mchedlov-Petrossyan N. O., **Vodolazkaya N. A.**, Patsenker L. D., Doroshenko A. O. Stability of Rhodamine Lactone Cycle in Solutions: Chain–Ring Tautomerism, Acid–Base Equilibria Interaction with Lewis Acids, and Fluorescence // Colorants. – 2022. – Vol. 1. – P. 58–90. https://doi.org/10.3390/colorants1010006
2021	Mchedlov-Petrossyan N. O. and **Vodolazkaya N. A.** Protolytic equilibria in organized solutions: Ionization and tautomerism of fluorescein dyes and related indicators in cetyltrimethylammonium chloride micellar solutions at high ionic strength of the bulk phase // *Liquids*. – 2021. – Vol. 1. – P. 1–24. https://doi.org/10.3390/liquids1010001
2020	Vus K., Tarabara U., Balklava Z., Nerukh D., Stich M., Laguta A., **Vodolazkaya N.**, Mchedlov-Petrossyan N., Farafonov V., Kriklya N., Gorbenko G., Trusova V., Zhytniakivska O., Kurutos A., Gadjev N., Deligeorgiev T. Association of novel monomethine cyanine dyes with bacteriophage MS2: A fluorescence study // *J. of Molecular Liquids*. – 2020. – Vol. 302. – P. – 112569. https://doi.org/10.1016/j.molliq.2020.112569
2019	Nasir T., **Vodolazkaya N.A.**, Herzog G., Walcarius A. Critical effect of film thickness on preconcentration electroanalysis with oriented mesoporous silica modified electrodes // Electroanalysis. – 2019. – Vol. 31. – P. – 202–207. DOI: 10.1002/elan.201800533
2018	Mchedlov-Petrossyan N.O., Steinbach K., **Vodolazkaya N.A.**, Samoylov D.V., Shekhovtsov S.V., Omelchenko I.V., Shishkin O.V. The structure of anionic species of 2,4,5,7-tetranitrofluorescein as studied by ESI, NMR, and X-ray techniques // Coloration Technology. – 2018. – DOI: 10.1111/cote.12351
2017	Mchedlov-Petrossyan N.O., Cheipesh T.A., **Vodolazkaya N.A.** Acid-base dissociation and tautomerism of two aminofluorescein dyes in solution // Journal of Molecular Liquids. – 2017. – Vol. 225. – P. 696–705. DOI 10.1016/j.molliq.2016.10.121
	Obukhova E.N., Mchedlov-Petrossyan N.O., **Vodolazkaya N.A.**, Patsenker L.D., Doroshenko A.O., Krasovitskii B.M. Absorption, Fluorescence, and Acid-Base Equilibria of Rhodamines in Micellar Media of Sodium Dodecyl Sulfate // Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy. – 2017. – Vol. 170. – P. – 138–144. DOI 10.1016/j.saa.2016.07/002

Monograph in Russian

N. A. Vodolazkaya, N. O. Mchedlov-Petrossyan. Acid-Base Equilibria of Indicator Dyes in Organized Solutions. – Published by V. N. Karazin Kharkov National University Press, Kharkiv, 2014. – 460 p.

Research Interests

Protolytic equilibria in lyophilic nano-sized dispersions (in micellar solutions of surfactants; in direct and reversed microemulsions; in the suspensions of liposomes; in the suspension of silica nanoparticles modified with cationic surfactant; in aqueous solutions of calixarene and of cationic dendrimers; in Langmuir–Blodgett films).

Differentiating influence of the organized media and salt effects.

Protolytic equilibria and solvation of fluorescein dyes and of solvatochromic Reichardt's indicators in ultramicroheterogeneous dispersions.

Synthesis and physico-chemical characterization of ordered mesoporous (organo)silica materials.

Managed the basic techniques of experimental physical chemistry

√ UV-VIS electronic spectroscopy in lyophilic ultramicroheterogeneous systems;
√ DLS;
√ spectrofluorimetry;
√ potentiometry;
√ IR spectroscopy;
√ cyclic voltammetry;
√ electrochemically assisted self-assembly (EASA) method for preparation of organically modified mesoporous silica thin films.

Language

Russian, Ukrainian (Native)
English (Level B2 Upper Intermediate)
French (Level A2 Pre-Intermediate)

April, 2022