


C U R R I C U L U M V I T A E

SURNAME	DOROSHENKO	
NAME AND PATRONYMIC	Andrey Olegovich	
TITLE	Professor (2004), D.Sc. (2002), Ph.D.	
SEX	Male	
DATE OF BIRTH	1959, December, 25	
PLACE OF BIRTH	Kharkiv, Ukraine	
CITIZENSHIP	Citizen of Ukraine	
MARITAL STATUS	Married, 2 children	
HOME ADDRESS Phone	24 ^A , Poltavsky shliakh, Apt. 4, 61052 Kharkiv, UKRAINE +38 057 7243835	
WORK ADDRESS Phone Fax E-mail	Chemical faculty, V.N. Karazin Kharkiv National University, 4 Svobody sq., 61022 Kharkiv, UKRAINE +38 057 7075335 +38 057 7075130 andrey.o.doroshenko@karazin.ua andrey.o.doroshenko@univer.kharkov.ua	
EDUCATION	University level, M.Sc. in organic chemistry	1976-1981, Department of Chemistry, Kharkiv State University, Kharkiv, Ukraine.
SCIENCE DEGREES	Ph.D. in organic chemistry	1990, Kharkiv State University, Kharkiv, Ukraine. Ph.D. thesis title: " <i>Nature and reaction ability of the excited states in the series of isocarbostryl derivatives</i> ".
	D.Sci. in organic and physical chemistry	2002, Kharkiv V.N. Karazin National University, Kharkiv, Ukraine. D.Sc. thesis title: " <i>Structure and photonics of abnormally high Stokes shift organic luminophores</i> "
EMPLOYMENT SINCE GRADUATING	Engineer - Chemist Researcher Senior Research Associate Head of Laboratory of Spectroscopy Head of Department of Physical Organic Chemistry Associate Professor Full Professor Head of Department of Organic Chemistry	Institute for Chemistry at Kharkiv State University. 1981–1986. Institute for Chemistry at Kharkiv State University. 1986–1992. Institute for Chemistry at Kharkiv State University. 1992–1995. Institute for Chemistry at Kharkiv State University. 1995–1996. Institute for Chemistry at Kharkiv State University (from 1999 – Kharkiv V.N.Karazin National University). 1996 – present time, from 2002 – on the part-time basis. Department of Organic Chemistry, Kharkiv V.N. Karazin National University. 2002 – 2004. Department of Organic Chemistry, Kharkiv V.N. Karazin National University. 2004 – 2015. Department of Organic Chemistry, Kharkiv V.N. Karazin National University. 2015 – present time.

INTERNATIONAL SCIENCE PROJECTS

- INTAS project 96-1225 “Crowned ketocyanine dyes as a new generation of fluorescent probes sensitive to biomembrane surface potential” - *research team leader*
- INTAS project 97-1730 “New derivatives of *p*-menthane-3-ones as chiral components of liquid crystalline systems” - *research team leader*
- International science Ukraine-Israeli project M-83/2009 (Ministry of Education and Science of Ukraine) “Chemical and biological sensor for water toxicity” - *research team leader*
- Swiss National Science Foundation project IZ73Z0_127864 (SCOPES 2009-2012 program) “Design, synthesis and photophysical investigations of self organized nanoassemblies of noble metal nanoparticles and organic luminophores – new materials for optical devices, bio and chemosensors” - *research team leader*
- International science Ukraine(DFFD)-Russia(RFFI) project F53.3/006 “Design of new spirocyclic systems, containing condensed heterocyclic moiety” - *research team leader*
- Several STCU projects

MEMBERSHIP

- European Photochemical Association (EPA) - since 1997.

THE MAIN FIELDS OF SCIENCE INTERESTS

- Electronic absorption and emission spectroscopy of conjugated aromatic and heterocyclic organic compounds.
- Time-resolved fluorometry of conjugated aromatic and heterocyclic organic compounds with respect to their conformational changes and reaction ability in the electronically excited states.
- Primary photophysical and photochemical processes in molecules of conjugated aromatic and heterocyclic organic compounds, which result in the appearance of abnormally high Stokes shifted fluorescence emission.
- Excited state intramolecular proton transfer (ESIPT) in organic fluorescent molecules: mechanism, molecular structure - photophysics relationships, design of the new ESIPT systems.
- Quantum-chemical calculations of spectra, electronic structure, molecule conformations and efficiency of primary photophysical radiative and radiationless processes of conjugated aromatic and heterocyclic organic compounds.
- Protolytic interactions and metal ions complex formation of conjugated aromatic and heterocyclic organic compounds in their ground and excited states.
- Computer programming applied to chemistry, spectroscopy and fluorescence kinetics.
- Photochemistry of conjugated aromatic and heterocyclic organic compounds. E-Z isomerization of aromatic ethylenic derivatives. Photochromism of azyridinic compounds in the crystalline state, solutions and polymer matrixes.
- Design and application of organic aromatic and heterocyclic compounds as fluorescent probes and sensors for studying various biological systems.

EDITOR

Central European Journal of Chemistry (fluorescence spectroscopy) – 2004-2017.

Functional Materials, NAN of Ukraine (2015-present time). <http://functmaterials.org.ua/editorial>

TEACHING EXPERIENCE

- General Course of Organic Chemistry for Russian- and English-speaking students (Chemical Department, Medical Department, Biological Department)
- Theoretical backgrounds of Organic Chemistry (special course, Chemical Department)
- Physical Methods in Organic Chemistry (special course, Chemical Department)
- Bioorganic Chemistry (general course, Chemical Department, Medical Department)

LANGUAGES

Ukrainian and Russian - native languages, English - nearly fluent.

PUBLICATIONS

Over 250 science articles in Soviet, Russian, Ukrainian and International journals (116 publications included in the SCOPUS database).

SCOPUS: h-index 21, 1603 citations. <https://www.scopus.com/authid/detail.uri?authorId=7005978594>

ORCID: <http://orcid.org/0000-0002-9643-9549>

Google Scholar: h-index 26, 2250 citations.

https://scholar.google.com.ua/citations?user=j_VCErIAAAAJ&hl=uk

LATEST PUBLICATION ACTIVITY

- 1) Obukhova OM, Mchedlov-Petrosyan NO, Vodolazkaya NA, Patsenker LD, Doroshenko AO. Stability of Rhodamine Lactone Cycle in Solutions: Chain–Ring Tautomerism, Acid-Base Equilibria, Interaction with Lewis Acids, and Fluorescence // *Colorants* **1** (2022) 58-90
<https://doi.org/10.3390/colorants1010006>
- 2) Kolomoitsev OO, Kotlyar VM, Tarasenko DO, Doroshenko AO. Novel Asymmetric Thiazolyl-Substituted Penta-1,4-Dien-3-Ones and 3,5-Diaryl-2-Pyrazolines // *Polycyclic Aromatic Compounds* **42** (2022) 3264 - 3280
<https://doi.org/10.1016/10.1080/10406638.2020.1858882>
- 3) Chumak AYu, Mudrak VO, Kotlyar VM, Doroshenko AO. 4'-Nitroflavonol fluorescence: Excited state intramolecular proton transfer reaction from the non-emissive excited state // *Journal of Photochemistry and Photobiology A: Chemistry* Volume 4061 (2021) 112978
<https://doi.org/10.1016/j.jphotochem.2020.112978>
- 4) Kolos NN, Nazarenko NV, Shishkina SV, Doroshenko AO, Shvets EG, Kolosov MA , Yaremenko FG. Synthesis, study of the structure, and modification of the products of the reaction of 4-aryl-4-oxobut-2-enoic acids with thiourea // *Chemistry of Heterocyclic Compounds* **56** (2020) 1202–1209
<https://doi.org/10.1007/s10593-020-02798-y>
- 5) Chumak AYu, Denysieva YO, Kolomoitsev OO, Kotlyar VM, Shvets EH, Doroshenko AO. N-ethyl substituted 2-benzimidazolyl-3-hydroxychromone: Atypical to highly fluorescent dyes of flavonol series excited state intramolecular proton transfer to nitrogen // *Journal of Luminescence* **223** (2020) 117206
<http://dx.doi.org/10.1016/j.jlumin.2020.117206>
- 6) Kolomoitsev OO, Kotliar VM, Tarasenko DO, Buravov OV, Doroshenko AO. 2,4-Disubstituted 4-(1,3-thiazol-5-yl)but-3-en-2-ones: synthetic approaches to and consequent chemical modification // *Monatshefte fur Chemie* **151** (2020) 765–772
<http://dx.doi.org/10.1007/s00706-020-02612-7>
- 7) Doroshenko AO, Kyrychenko AV, Valyashko OM, Kotlyar VM, Svechkarev DA. 4'-Methoxy-3-hydroxyflavone excited state intramolecular proton transfer reaction in alcoholic solutions: Intermolecular versus intramolecular hydrogen bonding effect // *Journal of Photochemistry and Photobiology A: Chemistry* **383** (2019) 111964
<https://www.sciencedirect.com/science/article/abs/pii/S1010603019305143>
- 8) Kotlyar VM, Kolomoitsev OO, Nikolaievskiy DV, Pedan PI, Chumak AYu, Orlov VD, Shishkina SV, Doroshenko AO. Photoreactive fused aziridinylpiperazines on the background of 4-substituted chalcones and their benzimidazolic analogs // *Journal of Molecular Structure* **1180** (2019) 741-746
<https://www.sciencedirect.com/science/article/abs/pii/S0022286018314364>
- 9) Zbruyev AI, Shishkin OV, Doroshenko AO, Desenko SM, Chebanov VA. Stepwise photoinduced transformation of fused aziridines via stable biradicals and azomethine ylides // *Journal of Photochemistry and Photobiology A: Chemistry* **353** (2018) 469-476.
<https://www.sciencedirect.com/science/article/pii/S101060301731078X>

- 10) Khristenko IV, Panteleimonov AV, Iliashenko RYu, Doroshenko AO, Ivanov VV, Tkachenko OS, Benvenuti EV, Kholin YuV. Heterogeneous polarity and surface acidity of silica-organic materials with fixed 1-n-propyl-3-methylimidazolium chloride as probed by solvatochromic and fluorescent dyes // *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **538** (2018) 280-286.
<https://www.sciencedirect.com/science/article/pii/S0927775717310075>
- 11) Kondratyeva I, Orzeł Ł, Kobasa I, Doroshenko A, Macyk W. Photosensitization of titanium dioxide with 4'-dimethylaminoflavonol // *Materials Science in Semiconductor Processing* **42** (2016) 62-65.
<https://www.sciencedirect.com/science/article/pii/S1369800115301335>
- 12) Lyapunov A, Kirichenko T, Kulygina C, Zubatyuk R, Fonari M, Kyrychenko A, Doroshenko A. New fluorenonocrownphanes containing azobenzene: synthesis, properties and interaction with paraquat // *Journal of Inclusion Phenomena and Macrocyclic Chemistry* **81** (2015) 499-508.
<https://link.springer.com/article/10.1007/s10847-015-0484-0>
- 13) Iliashenko RY, Borodin OO, Wera M, Doroshenko AO. 2,5-bis[2-(2-phenyl-1,3-oxazol-5-yl)phenyl]-1,3,4-oxadiazole—new sterically hindered high Stokes shift fluorophore sensitive to media viscosity // *Journal of Photochemistry and Photobiology A: Chemistry* **298** (2015) 68-77.
<https://www.sciencedirect.com/science/article/pii/S1010603014004626>
- 14) Borodin OO, Il'yashenko RY, Doroshenko AO. 5-[4-(N,N-Dimethylamino) Phenyl]-2-(4-Pyridyl)-1,3-Oxazole as a Fluorescent Probe for Monitoring Microheterogeneous Media // *Chemistry of Heterocyclic Compounds* **50** (2014) 379-388.
<https://link.springer.com/article/10.1007/s10593-014-1486-3>
- 15) Dereka B, Svechkarev D, Doroshenko AO. Facile ultrasensitive monitoring of mercury ions in water by fluorescent ratiometric detection // *Central European Journal of Chemistry* **11** (2013) 584-593.
<https://link.springer.com/article/10.2478/s11532-012-0193-0>
- 16) Doroshenko AO, Matsakov AY, Nevskii OV, Grygorovych OV. Excited state intramolecular proton transfer reaction revisited: S₁ state or general reversibility? // *Journal of Photochemistry and Photobiology A: Chemistry* **250** (2012) 40-49.
<https://www.sciencedirect.com/science/article/pii/S1010603012004686>
- 17) Kyrychenko A, Karpushina GV, Svechkarev D, Kolodezny D, Bogatyrenko SI, Kryshtal AP, Doroshenko AO. Fluorescence probing of thiol-functionalized gold nanoparticles: is alkylthiol coating of a nanoparticle as hydrophobic as expected? // *The Journal of Physical Chemistry C* **116** (2012) 21059-21068.
<https://pubs.acs.org/doi/abs/10.1021/jp3060813>

SIGNATURE

September 15, 2022.

