

## PERSONAL INFORMATION

**Irina Korotkova**

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Scopus Author ID: 6701433065, h-index 4

Web of Science Researcher ID [Q-7676-2016](https://orcid.org/0000-0003-0577-9634)

🔍 Google Scholar <https://scholar.google.com/citations?authuser=1&user=Yuf9v34AAAAJ>,  
h-index 8

Mad., 28 February 1960, Ukrainian

POSITION  
PREFERRED JOB  
STUDIES APPLIED  
FOR

**Subject area:** agriculture, biotechnologies, plant protection, crop growing technologies; spectroscopy of crystals and molecules, structure and spectral-luminescent properties of heteroaromatic molecules.

**Scientific achievements and experience.** The results of the scientific studies (270 articles) in subject areas are presented in National Journals and 18 articles in International journals which belong to the *Scopus* and 20 in *Web of Science* database.

## WORK EXPERIENCE

At 2019 I am a Professor of the Department of Biotechnology and Chemistry, Educational and Scientific Institute of Agricultural Technologies, Breeding and Ecology, Poltava State Agrarian University, Ukraine (Ministry of Education and Science of Ukraine)

At 2017 I am a Professor of the Department of General and Biological Chemistry of Poltava State Agrarian Academy.

At 1996 I am a lecture of Poltava State Agrarian Academy, Department of General and Biological Chemistry. I'm lecturing of Physical Chemistry, Organic and Analytical Chemistry.

EDUCATION AND TRAINING

Replace with dates (from - to) 1977-1982 MSc – Far Eastern State University (Russia), faculty specialization “Chemistry”, qualification “Chemist”  
**Ph.D. (Candidate of Sciences) in Physical Chemistry (June, 1998)**, Institute of Physical Chemistry Named After L.V. Pysarzhevsky of the National Academy of Sciences of Ukraine. Thesis title: “The influence of temperature and solvent polarity on luminescent properties of coumarines and quinolone derivatives”.  
 Second academic degree “**Doctor of Sciences**” (Dec. 2008), National Academy of Sciences of Ukraine.

PERSONAL SKILLS

Mother tongue(s)	Ukrainian, C1/2 Proficient user			
Other language(s)	UNDERSTANDING		SPEAKING	WRITING
	Listening	Reading	Spoken interaction	
English	A1/2	A1/2	A1/2	A1/2

Other language - English: reading, understanding, writing an articles. I a little speak, but have not practices, but the all articles into foreign scientist journals in English I wrote personally.

- Organisational / managerial skills Creation and organization processes the General Biotechnology Laboratory at Department
- Job-related skills 25 years of experience in higher education system, Poltava State Agrarian University, Poltava, Ukraine
- Computer skills Good command of Microsoft Office™ tools
- Other skills Skills of medical research (biochemical, hematological, general, immunological, etc.) while working as head of the clinical diagnostic laboratory in the hospital from 1990 to 2013

ADDITIONAL INFORMATION

## Publications (last years)

- **Korotkova I. V.**, Chaika T. O., Romashko T. P., *et al.* Emmer wheat productivity formation depending on pre-sowing seed treatment method in organic and traditional technology cultivation. *Regulatory Mechanisms in Biosystems*. 2023, 14(1). P.41-47. <https://doi.org/10.15421/022307>
- **Korotkova I.**, Chaika T., Romashko T., Rybalchenko A. Photosynthetic Pigments Content in Emmer Wheat Plants as Criteria of Productivity in Traditional and Organic Farming Technology. *Innov Biosyst Bioeng*. 2022. 6(1):31-9. <http://ibb.kpi.ua/article/view/255277>
- Chaika T., **Korotkova I.**, Barabolia O., Shokalo N., Chetveryk O., Bilenko O., Krykunova V. Technological peculiarities of the mustang and *Triticum dicoccum* (Schrank) Schuebl wheat cultivation according to organic farming standards. *International Journal of Botany Studies*. 2021. Vol. 6. No 6. P. 205-210
- Velit I., **Korotkova I.**, Marenych M., Bilovod I., Kolesnikova L., Khomenko B. Effect of supplemental lighting spectral composition on the tomato yield in greenhouses. *International Journal of Botany Studies*. 2021. Vol. 6. No 6. P. 226-233
- Horobets M., Chaika T., **Korotkova I.**, Pysarenko P., Mishchenko O., Shevnikov M., Lotysh I. Influence of growth stimulants on photosynthetic activity of spring barley (*Hordeum vulgare* L.) crops. *International Journal of Botany Studies*. 2021. Vol. 6. No 2. P. 340-345.
- **Korotkova I.**, Marenych M., Hanhur V., Laslo O., Chetveryk O., Liashenko V. Weed Control and Winter Wheat Crop Yield with the Application of Herbicides, Nitrogen Fertilizers, and Their Mixtures with Humic Growth Regulators. *Acta Agrobotanica*. 2021. Vol.74. Article748. <https://doi.org/10.5586/aa.748>
- Hanhur V., Marenych M., **Korotkova I.**, Gamayunova V., Len O., Marinich L., Olepir R. Dynamics of nutrients in the soil and spring barley yield depending on the rates of mineral fertilizers. *International Journal of Botany Studies*. 2021. Vol. 6. No. 5. P. 1298-1306
- Volodymyr Hanhur, Mykola Marenych, Liudmyla Yeremko, Svitlana Yurchenko, Olena Hordieieva and **Irina Korotkova**. The effect of soil tillage on symbiotic activity of soybean crops. *Bulgarian Journal of Agricultural Science*. 2020. 26 (No 2). P. 365–374
- Anatoly Semenov, **Irina Korotkova**, Tamara Sakhno, Mykola Marenych, Volodymyr Hanhur, Viktor Liashenko, Viktor Kaminsky. Effect of UV-C radiation on basic indices of growth process of winter wheat (*Triticum aestivum* L.) seeds in pre-sowing treatment. *Acta agriculturae Slovenica*. 2020. 116/1. P. 49–58. <https://doi.org/10.14720/aas.2020.116.1.1563>
- Marenych M.M., Kaminsky V.F., Bulygin C.Yu., Hanhur V.V., **Korotkova I.V.**, Yurchenko S.O., Bahan A.V., Taranenko S.V., Liashenko V.V. Optimization of factors of managing productive processes of winter wheat in the Forest-Steppe. *Agricultural Science and Practice*. 2020. 7(2). P.44-54
- Korneev O. V., Sakhno T. V., Korotkova I. V. Nanoparticles-based photosensitizers with effect of aggregation-induced emission. *Biopolymers and Cell*. 2019. V. 35. No 4. P 249–267. <http://dx.doi.org/10.7124/bc.000A08>
- Granchak V. M., Sakhno T. V., **Korotkova I. V.**, Sakhno Yu. E., Kuchmy S. Ya. Aggregation-Induced Emission In Organic Nanoparticles: Properties And Applications: A Review. *Theoretical and Experimental Chemistry*. 2018. V. 54. No. 3. P.147-177. <https://doi.org/10.1007/s11237-018-9558-6>
- **I. Korotkova**, T. Sakhno, I. Drobit'ko, Y. Sakhno, N. Ostapenko. Structure of poly(di-n-hexylsilane) in nanoporous materials. *Chemical Physics*. 2010. 374. P.90-103. <https://doi.org/10.1016/j.chemphys.2010.06.029>

## Conferences (last years)

1. Sakhno T.V., **Korotkova I.V.**, Barashkov N.N. Spectrophotometric determination of Cu(I) and Cu(II) ions in ionic liquids: Book of Abstracts of XXV Galyna Puchkovska International School-Seminar “*Spectroscopy of Molecules and Crystals*”, September 21-24, 2021, Institute of Physics NAS of Ukraine, Kyiv, Ukraine. ISBN 978-617-8016-13-5. P.180  
Korotkova, A.A. Semenov, T.V. Sakhno, N.N.Barashkov. Bactericidal Disorders of Water in bases of complex action of UV-radiation and ozone. 258 ACS National Meeting in San Diego, August 25-29, 2019. [https://plan.core-apps.com/acs\\_sd2019/abstract/927a10eb-502f-4d2e-9d91-ec3f7466ab0e](https://plan.core-apps.com/acs_sd2019/abstract/927a10eb-502f-4d2e-9d91-ec3f7466ab0e)
3. **Irina Korotkova**, Tamara Sakhno, Nikolay Barashkov, Irina Irgibaeva, Anuar Aldongarov, Artur Mantel, Irina Barashkova. Colored Magnetic Bacteria and their Use for Animal Feed Application //8 th International Conference «Physics of Liquid Matter: Modern Problems (PLMMP)»// Taras Shevchenko National University of Kyiv, Bogolyubov Institute for Theoretical Physics of the National Academy of Sciences of Ukraine. Kyiv, May 18-22, 2018 – P.135.
4. **Irina Korotkova**, Nikolay Barashkov, Tamara Sakhno, Artur Mantel, Anuar Aldongarov, Irina Irgibaeva. Evaluation of Binding Affinity of Ethidium Homodimer-III to DNA by Fluorescent Method//11<sup>th</sup> International Conference «Electronic processes in organic and inorganic materials» (ICEPOM-11). Ivano-Frankivsk, Ukraine May 21 - 25, 2018, Vasyl Stefanyk Precarpathian National University, Center of Chemical Materials Science and Nanotechnology. – P.213.
5. **Korotkova I.V.**, Sakhno T.V. Zvenihorodska T.V., Barashkov N. N. Encapsulation of horseradish peroxidase in water-immiscible coacervates with enhanced of thermostability//6th International Conference "Nanotechnologies and Nanomaterials" NANO-2018. - 27-30 August 2018 Taras Shevchenko Kyiv National University, Kyev.
6. **Korotkova I.V.**, Sakhno T.V. AIE Based Coumarin Chromophores. Theoretical Study// XXIII Galyna Puchkovska International School-Seminar «Spectroscopy of molecules and crystals» Kyiv, September 20–25, 2017 Taras Shevchenko National University, Institute of Physics NAS of Ukraine. – P.226-227.
7. Sakhno, T.V., **Korotkova, I.V.**, Pustovit, S.V., Yaremko, R.V. Quantum-chemical characterization of photorefractive polymers containing indol-base chromophores// Proceedings of SPIE - The International Society for Optical Engineering. - 2003. – V. 5186. -P. 275-279

## Monographs (last years)

- **Irina Korotkova**, Anatolii Semenov, Tamara Sakhno. The ultraviolet radiation: disinfection and stimulation processes. *LAP LAMBERT Academic Publishing*. 2020. 58 p. (Engl., Span., Fren.)
- **Irina Korotkova**, Tamara Sakhno. Nanoparticle with the Aggregation-induced emission effect: Properties and applications. *LAP LAMBERT Academic Publishing*. 2019. 93 p