PERSONAL:

Born: January 6, 1976; Bryansk, Russian Federation

Citizenship Ukraine

Affiliation Institute of Functional Materials Chemistry of State Scientific Institution "Institute for Single Crystals" of National Academy of Sciences of Ukraine (Nauky Ave. 60, Kharkiv, Ukraine, 61072)

Positions: Senior researcher, head of the Applied Chemistry Group

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EDUCATION AND ACADEMIC STATUSES:

Specialist (M.Sc.) **Chemistry**, June 1997, Kharkiv State University

Candidate of Science (PhD) **Technology of Organic Synthesis Products,** April 2014, Volodymyr Dahl East Ukrainian National University

Senior researcher Chemistry, February, 22, 2023, SSI "Institute for Single Crystals" NASU

PROFESSIONAL CAREER:

August 1992 – July 1997 **Student**, Kharkiv State University, Ukraine

November 1997 – December 1999 **Chemist-Engineer**, Kharkiv Plant for Chemical Reagents

January 2000 – December 2002 **Production unit foremaster of the drug substances production shop,** Kharkiv Plant for Chemical Reagents

January 2003 – June 2007 **Head of the central plant laboratory**, Kharkiv Plant for Chemical Reagents

July 2007 – October 2008 **Advanced engineer**, Department of Heterocyclic Compounds Chemistry, SSI "Institute for Single Crystals" NAS of Ukraine, Kharkiv

November 2008 – October 2011	**Postgraduate student**, SSI "Institute for Single Crystals" NAS of Ukraine, Kharkiv
November 2011- December 2016	**Junior Researcher,** Department of Heterocyclic Compounds Chemistry, SSI "Institute for Single Crystals" NAS of Ukraine, Kharkiv
December 2016- Present time	**Senior Researcher,** Department of Organic and Bioorganic Chemistry, SSI "Institute for Single Crystals" NAS of Ukraine, Kharkiv

RESEARCH INTERESTS:

Organic processes research&development (OPR&D). Physicochemical processes under non-classical methods of activation: microwave- and ultrasound-assisted processes. Energy efficiency and process intensification. Process scale-up. Supramolecular Chemistry.

EXPERIMENTAL EXPERIENCE:

R&D in the production of active pharmaceutical ingredients (API), from process feasibility to scale-up. Development of microwave-assisted processes for chemical and pharmaceutical production (synthesis, drying, crystallization, etc.). Process intensification through the use of non-classical activation methods. Supervision of students and PhD students.

PUBLICATIONS:

Total amount: **17** publications in Ukrainian and international scientific journals, **16** patents, **10** Conference proceedings.

Examples of publications in Q1 and Q2 journals (Scimago):

Journals Q1

1. Pinchukova N.A., Voloshko A.Y., Merko M.A., Bondarenko Ya.A., Chebanov V.A. Intensification of ion exchange desorption of thiamine diphosphate by low-powered ultrasound // *Ultrasonics Sonochemistry*, 2018, 41, 261-266.
2. Pinchukova N.A., Voloshko A.Yu., Baumer V.N., Shishkin O.V., Chebanov V.A. The use of microwave irradiation for zeolite regeneration in a continuous ethanol dewatering process // *Chemical Engineering and Processing*, 2015, 95, 151-158.

Journals Q2

1. Oleg A. Zhikol, Daria Yu. Miasnikova, Olga V. Vashchenko, Natalia A. Pinchukova, OleksandrI. Zbruyev, Svitlana V. Shishkina, Alexander Kyrychenko, Valentyn A. Chebanov. Host-guest complexation of (pyridinyltriazolylthio) acetic acid with cucurbit[n]urils (n=6,7,8): Molecular calculations and thermogravimetric analysis // *Journal of Molecular Structure,* 2023, Volume 1294, Part 2, 136532.

International Conferences:

1. A Scale-up microwave synthesis of cocarboxylase / **N. A. Pinchukova**, V. A. Chebanov, S. M. Desenko, N. Yu. Frishman, N. Yu. Gorobets, I. V. Knyazyeva, K. S. Ostras, N. V. Pogorelova, O. V. Shishkin, S. V. Shishkina, D. S. Sofronov, V. V. Vashchenko, A. Yu. Voloshko // 2nd Symposium on Microwave Accelerated Synthesis. - 26-28 September 2007 : Abstracts. – Duesseldorf, 2007. - P. 52.

2. Design of New Scale-Up Microwave Equipment for Chemical Industry / **N. A. Pinchukova**, A. Yu. Voloshko, S. M. Desenko, V. A. Chebanov, O. V. Shishkin // Zing| Microwave and Flow Chemistry, 28-31 January 2009 : Abstracts. - Jolly Beach, Antigua, 2009. - P. 51.

3. Application Diversity of Microwaves for Industrial Technology / **Natalia A. Pinchukova**, Valentin A. Chebanov, Sergey M. Desenko, Vladimir P. Semynozhenko, Oleg V. Shishkin, Aleksander Yu. Voloshko // 8th European Congress of Chemical Engineering, 25-29 September 2011, Berlin, Germany.

4. Mechanisms of microwave-dielectric interactions in various physico-chemical processes / **N. Pinchukova**, V. Chebanov, O. Shishkin, A. Voloshko // VIIth International Chemistry Conference "Kyiv-Toulouse", 2-7 June 2013 : Abstracts. – Kyiv, 2013. - P. 48.

5. INTENSIFICATION OF ION-EXCHANGE PROCESSES BY MEANS OF LOW-POWERED ULTRASOUND / Natalia A. Pinchukova, Alexander Yu.Voloshko, Valentin A. Chebanov Maria A. Merko / *9th International Conference in Chemistry Kyiv-Toulouse ICKT-9 (ICTK-9),* June 5 - 9, 2017, Kyiv, Ukraine.

6. Daria Miasnikova, **Natalia Pinchukova**, Vyacheslav Saraev, Oleksandr Zbruyev, Valentyn Chebanov. Chemical modification and quantification of 1-methylcyclopropene in supramolecular complex with cucurbit[6]uril // XXIII International Symposium „Advances in the Chemistry of Heteroorganic Compounds". Poland, 2022

Patents:

1. Pinchukova N.A. [et al.], Method for drying of cocarboxylase hydrochloride, Patent UA 82421, 2008.
2. Method for preparation of cocarboxylase hydrochloride, Patent UA 85496, 2009.
3. Pinchukova N.A. [et al.], Device for drying of free-flowing dielectric materials, Patent UA 84354, 2008
4. Pinchukova N.A. [et al.], Method for preparation of polyphosphoric acid, Patent UA 89132, 2009.
5. Pinchukova N.A. [et al.], Device for continuous dewatering of organic solvents with zeolites.

Patent UA 107395, 2016.

6. Pinchukova N.A. [et al.], Method for preparation of cocarboxylase with the use of ultrasound, Patent UA 146388, 2021.