

# CURRICULUM VITAE



**Pritula Igor**

## **Affiliation and official address:**

Director, Corresponding Member of NAS of Ukraine, Head of Department of Nonlinear Crystals, Institute for Single Crystals NAS of Ukraine, 61072, Ukraine, Kharkiv, Nauky Ave. 60.

E-mail: [pritulo@isc.kharkov.ua](mailto:pritulo@isc.kharkov.ua), [igormpritulo@gmail.com](mailto:igormpritulo@gmail.com)

## **Education (*degrees, dates, universities*)**

- 1981 – M. S. Kharkov State University, USSR (Physics)  
1992 – Cand. Sc. (Ph.D) B. Verkin Institute for Low Temperature Physics and Engineering NASU (Thermal physics and molecular physics, Optics), Kharkov, USSR  
1999 – Diploma of senior research scientist (Solid state physics), Institute for Single Crystals NASU, Kharkov, USSR  
2011 – Dr. Sc. Institute for Single Crystals NASU, Kharkiv, Ukraine (Physics of Semiconductors and Dielectrics)

## **Career/Employment (*employers, positions and dates*)**

- |             |   |  |
|-------------|---|--|
| 1981 - 1983 | Engineer  | Institute for Low Temperature Physics and Engineering NASU, Kharkov, USSR              |
| 1983 - 1984 | Senior engineer                                 | Institute for Low Temperature Physics and Engineering NASU, Kharkov, USSR              |
| 1984 - 1988 | Junior Research Scientist                       | Institute for Low Temperature Physics and Engineering NASU, Kharkov, USSR              |
| 1988 - 1991 | Postgraduate                                    | Institute for Low Temperature Physics and Engineering NASU, Kharkov, USSR              |
| 1991 - 1993 | Research Scientist                              | B. Verkin Institute for Low Temperature Physics and Engineering NASU, Kharkov, Ukraine |
| 1993 - 2003 | Senior Research Scientist                       | Institute for Single Crystals NASU, Kharkov, Ukraine                                   |
| 2003 - 2014 | Scientific secretary, Senior Research Scientist | Institute for Single Crystals NASU, Kharkiv, Ukraine                                   |
| 2010 - 2014 | Head of the Laboratory                          | Institute for Single Crystals NASU, Kharkiv, Ukraine                                   |
| 2014 - date | Head of Department                              | Institute for Single Crystals NASU, Kharkiv, Ukraine                                   |
| 2015 - date | Director  | Institute for Single Crystals NASU, Kharkiv, Ukraine                                   |
| 2018 - date | Corresponding Member of NAS of Ukraine          | Institute for Single Crystals NASU, Kharkiv, Ukraine                                   |
| 2019 - date | Professor (Material Science)                    | Institute for Single Crystals NASU, Kharkiv, Ukraine                                   |

## Main field of activity and current research interest

Crystal growth, Physical properties of nonlinear-optical materials; Defects in crystals, Development and investigation of composite materials for laser and optoelectronic technique

## Honors, Awards, Fellowships, Membership of Professional Societies

International Soros Fundation Award (1996); Secretary of the Ukrainian Association for Crystal Growth (2003); Award of Kharkiv State Administration and Governor (2009); Award of National Academy of Sciences of Ukraine (2009); **I.N. Frantsevich Prize NAS of Ukraine in the field of physical materials research** (2009), Member of the European Network of Crystal Growth, ENCG (2015), Member of Bureau of Department of Physical and Technical Problems of Materials Science NASU (2015), NAS of Ukraine Award "For Professional Achievements" (2014), **State Prize of Ukraine in Science and Technology** (2015).

## Publications and patents

3- Books, 8- Chapters in books, 226 original articles, 7 patents;

Scopus *h*-index: **14** (Web of Science Researcher ID M-3573-2015);

<https://publons.com/researcher/2355304/igor-m-pritula/publications/>;

<https://www.scopus.com/authid/detail.uri?authorId=6602832466>;

<https://orcid.org/0000-0002-7188-4507>.

## Selected recent publications:

(1) S.V. Naydenov, A.P. Voronov, **I.M. Pritula**, C.F. Smith, *Scintillation Crystals of Thallium and Cerium Doped Potassium Dihydrogen Phosphate (KDP: Tl and KDP: Ce) for Selective Detection of Fast Neutrons*, In book: Chapter 5 in Advances in Materials Science Research, 2020, Vol. 43, P. 143-174, ISBN: 978-1-53618-730-4.

(2) M. Shopa, Y. Shopa, E. Kostenyukova, O. Bezkravnyaya, **I. Pritula**, *Optical activity and electro-optic effect of L -arginine doped KDP single crystals*, Optics and Laser Technology, 2019, Vol.119, P.105655, DOI:10.1016/j.optlastec.2019.105655, **Q1**.

(3) O.N. Bezkravnyaya, G.N. Babenko, A.D. Roshal, **I.M. Pritula et. al**, *Composite materials based on SiO<sub>2</sub>-matrices saturated with DAST*, Journal of Non-Crystalline Solids, 2020, Vol. 535, 1 May 119957, DOI:10.1016/j.jnoncrysol.2020.119957, **Q1**.

(4) M. Shopa, Y. Shopa, M. Shribak, **I. Pritula et. al**, *Polarimetric studies of L -arginine-doped potassium dihydrogen phosphate single crystals*, J.Appl.Cryst, 2020, Vol. 53, Part 5, P.1257-1265, DOI:10.1107/S1600576720010870 , **Q1**.

(5) N.O. Kovalenko, S.V. Naydenov, **I.M. Pritula**, S.N. Galkin, *II-Sulfides and II-Selenides: Growth, Properties and Modern Applications*, In book Single Crystals of Electronic Materials: Growth and Properties (Editor Roberto Fornari), Elsevier Limited, United Kingdom, 2017, Chapter No. 10, P. 1-32.

(6) J. Borc, K. Sangwal, **I. Pritula**, E. Dolzhenkova, *Investigation of pop-in events and indentation size effect on the (001) and (100) faces of KDP crystals by nanoindentation deformation*, Materials Science and Engineering: A, 2017, Vol. 708, P. 1-10, DOI:10.1016/j.msea.2017.09.069, **Q1**.

(7) **I. Pritula**, K. Sangwal, *Fundamentals of Crystal Growth from Solutions*, Chapter 29 in: Handbook of Crystal Growth, 2nd Edition, Bulk Crystal Growth, 2015.

(8) **I.M. Pritula**, O.N. Bezkravnyaya et al, *Spectral and Lasing Characteristics of Some Red and Nir Laser Dyes in Silica Matrices*, Chap. 13 in in the book 'Advanced Lasers: Laser Physics and Technology for Applied and Fundamental Science', O. Shulika, I. Sukhoivanov, eds., Springer Series in Optical Science, Dordrecht, 2015, Vol. 193, P. 199-212.

(9) V. Grachev, R. Tse, G. Malovichko, **I. Pritula**, O. Bezkravnyaya, A. Kosinova, *Paramagnetic defects in KH<sub>2</sub>PO<sub>4</sub> crystals with high concentration of embedded TiO<sub>2</sub> nanoparticles*, Journal of Applied Physics, 2016, Vol.119, P.034301-6, DOI:10.1063/1.4939731, **Q2**.

(10) **I.M. Pritula**, E.I. Kostenyukova, O.N. Bezkravnyaya, M.I. Kolybaeva, D.S. Sofronov, E.F. Dolzhenkova, A. Kanaev, V. Tsurikov, *KDP crystal doped with L-arginine amino acid: growth, structure perfection, optical and strength characteristics*, Optical Materials, 2016, Vol. 57, P. 217-224, DOI:10.1016/j.optmat.2016.04.044, **Q1**.

(11) L.A. Golovan, G.I. Petrov, V.Ya. Gayvoronsky, V.V. Yakovlev, **I.M. Pritula** *Broadband second-harmonic and sum-frequency generation in KH<sub>2</sub>PO<sub>4</sub> crystals doped with anatase nanocrystals*, Laser Phys. Lett., 2014, Vol. 11, P.075901, DOI: 10.1088/1612-2011/11/7/075901, **Q1**.