

CURRICULUM VITAE



Naydenov Sergei

Affiliation and official address:

Leading Research Scientist, Department of Nonlinear Crystals, Institute for Single Crystals NAS of Ukraine
61072 Ukraine, Kharkiv, Nauky Avenue 60.

E-mail: sergei.naydenov@gmail.com , naydenov@isc.kharkov.ua

Education (*degrees, dates, universities*)

1993 – M.Sc. in Physics and Techniques (Cum Laude), Kharkov State University, Kharkov, Ukraine.

1998 – Ph.D. in Physics and Mathematics, Institute for Single Crystals, Kharkov, Ukraine.

2007 – D.Sc. in Physics and Mathematics, Doctor of Sciences in Physics and Mathematics, Institute for Single Crystals, Kharkiv, Ukraine.

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

1993-1996	Postgraduate	Institute for Single Crystals, Kharkov, Ukraine
1996-1998	Junior Research Scientist	Institute for Single Crystals, Kharkov, Ukraine
1998 – 2003	Research Scientist	Institute for Single Crystals NASU, Kharkov, Ukraine
2003 – 2008	Senior Research Scientist	Institute for Single Crystals NASU, Kharkiv, Ukraine
2003 – 2005	Postdoctoral Researcher	Institute for Single Crystals NASU, Kharkiv, Ukraine
2003 – 2014	Senior Research Scientist	Institute for Scintillation Materials NASU (dual affiliation), Kharkiv, Ukraine
2008 – date	Leading Research Scientist	Institute for Single Crystals NASU, Kharkiv, Ukraine

Main field of activity and current research interest

Material Sciences; Theoretical and Mathematical Physics; Condensed Matter Physics; Physics of Complex Systems and Chaos; Physics of Nonlinear-Optical Materials; A2B6 Crystal Materials, Radiation and Neutron Detectors; Non-Destructive Testing and Radiography.

Honors, Awards, Fellowships, Membership of Professional Societies

Award of the International Science Foundation (by George Soros) (1994-1995); Young Research Fellow (by President of Ukraine) (1998-2000); Award of the National Academy of Sciences of Ukraine for Young Scientists (1999); Recipient of the Ukrainian National Academy of Sciences (2001-2002); A nominee as International Scientist of the Year by International Biographical Centre, (Cambridge, England) (2004); A nominee of the Who's Who in the World and of the Who's Who in Science and Engineering (Marquis, 2003-2008); A nominee as Leading Scientist of the World by International Biographical Centre (St. Thomas' Place, Great Britain) (2009); **Award of the President of Ukraine for Young Scientists (2003)**; Awards of the Washington-based Civilian Development and Research Fund (CRDF) (2003-2004, 2008-2010); Awards of NATO Science for Peace and Security Program (SPS) (2007-2012, 2013-2017); A nominee as Leading Scientist to the Encyclopedia of Modern Ukraine by Institute of Encyclopedic Research of

National Academy of Sciences of Ukraine together with T. Shevchenko Scientific Society (21 volume) (2019).

Publications and patents

2-Monographs, 7- Chapters in books, 177 original scientific publications, 4 patents;

Scopus *h*-index: **9** (Web of Science Researcher ID: AAB-8716-2021);

<https://publons.com/researcher/4180700/sergei-naydenov/publications/> ;

<https://www.scopus.com/authid/detail.uri?authorId=6601978831/> ;

<https://orcid.org/0000-0002-5585-763X/>

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*, Chapter 5, In book: *Advances in Materials Science Research*. 2020, Volume 43, P. 143-174, ISBN: 978-1-53618-730-4.

(2) **S.V. Naydenov**, V.D. Ryzhikov, C.F. Smith, *Single Crystal and Multi-Layer Composite Heavy-Oxide Scintillators for Efficient Fast Neutron Detection*, Chapter 4, In book: *Advances in Materials Science Research*. 2020, Volume 43, P. 103-142, ISBN: 978-1-53618-730-4.

(3) **S.V. Naydenov**, V.D. Ryzhikov, G.M. Onyshchenko, C.F. Smith, *Advanced multi-layer composite structures for fast neutron detection and shielding protection applications*, In book: *Micro and Nanostructured Composite Materials For Neutron Shielding Application* (Editors: T.A. Sajith, T. Sabu, A. Zakiah), Elsevier Ltd., United Kingdom, 2020, Chapter No. 12, P. 317-354. <https://doi.org/10.1016/B978-0-12-819459-1.00012-X/>

(4) N.O. Kovalenko, **S.V. Naydenov**, I.M. Pritula, S.N. Galkin, *II-Sulfides and II-Selenides: Growth, Properties and Modern Applications*, Chapter No. 9, In book: *Single Crystals of Electronic Materials: Growth and Properties* (Ed. Roberto Fornari), Elsevier Limited, United Kingdom, 2019, P. 303-330.

(5) V.D. Ryzhikov, **S.V. Naydenov**, G.M. Onyshchenko, L.A. Piven, T. Pochet, C.F. Smith, *Multi-layer fast neutron detectors based on composite heavy-oxide scintillators for detection of illegal nuclear materials*, *Nuclear Instruments and Methods in Physics Research, Section A*, 2018, V. 903C, P. 287-296. <https://doi.org/10.1016/j.nima.2018.06.074/>, **Q1**.

(6) V.D. Ryzhikov, **S.V. Naydenov**, T. Pochet, G.M. Onyshchenko, L.A. Piven, C.F. Smith, *Advanced Multi-layer Composite Heavy-Oxide Scintillator Detectors for High Efficiency Fast Neutron Detection*, *IEEE Trans. Nuclear Sciences*, Special issue for ANIMMA 2017, 2018, V. 65, Issue 9, P. 2547-2553. <https://doi.org/10.1109/TNS.2018.2825642/>, **Q1**.

(7) G. Onyshchenko, V. Ryzhikov, I. Yakymenko, V. Khodusov, **S. Naydenov**, A. Opolonin, S. Makhota, *The Investigation of Mechanisms of Fast Neutron Registration in Oxide Scintillators*, *East European Journal of Physics*, 2019, V. 3, P. 54-62. <https://doi.org/10.26565/2312-4334-2019-3-07>

(8) A.P. Voronov, **S.V. Naydenov**, I.M. Pritula, G.M. Onyshchenko, A.F. Shchus, I.I. Yakymenko *Scintillation Monocrystals of KDP:Ti and KDP:Ce Doped by Thallium and Cerium for Selective Detection of Fast Neutrons*, *East European Journal of Physics*, 2018, V. 5, P. 45-52; <https://doi.org/10.26565/2312-4334-2018-3-05>