CURRICULUM VITAE

Kovalenko Nazar

Affiliation and official address:
Senior Research Scientist, Department of Nonlinear Crystals, Institute for Single Crystals NAS of Ukraine,
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Education (*degrees, dates, universities)*

1998 – M. S.	Kharkov State University, Ukraine (Radiophysics and Electronics)
2003 – Cand Sc. (Ph.D)	Institute for Single Crystals NASU, Kharkov, Ukraine (Physics of Semiconductors and Dielectrics)

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

1997-1999	Engineer	Institute for Single Crystals NASU, Kharkov, Ukraine
1999-2002	Postgraduate	Institute for Single Crystals NASU, Kharkov, Ukraine
2002-2003	Engineer	Institute for Single Crystals NASU, Kharkov, Ukraine
2003	Junior Research Scientist	Institute for Single Crystals NASU, Kharkov, Ukraine
2003 - 2006	Research Scientist	Institute for Single Crystals NASU, Kharkiv, Ukraine
2006 - 2009	Postdoctoral Researcher	Institute for Single Crystals NASU, Kharkiv, Ukraine
2009 - 2012	Senior Research Scientist	Institute for Single Crystals NASU, Kharkiv, Ukraine
2012 - 2016	Head of Department	Institute for Single Crystals NASU, Kharkiv, Ukraine
2016 - to date	Senior Research Scientist	Institute for Single Crystals NASU, Kharkiv, Ukraine

Main field of activity and current research interest

Crystal growth of $A^{II}B^{VI}$ compounds and its solid solutions, active elements $A^{II}B^{VI}$:TM^{2+} for tunable IR lasers, semiconductor radiation detectors, nonlinear optics.

Publications and patents

2 books, 85 original articles, 9 patents
Scopus ***h***-index: **8**
https://www.scopus.com/authid/detail.uri?authorId=7101689098.

Selected recent publications:

(1) M.E. Doroshenko, H. Jelinkova, M Jelinek, A. Riha, J. Sulc, **N.O. Kovalenko**, I.S. Terzin, *Comparison of novel Fe^{2+}:$Zn_{1-x}Mn_xTe$ ($x \approx 0.3$) laser crystal operating near 5 μm at 78 K with other known Mn co-doped A^{II}-B^{VI} solid solutions*, Optical Materials, 2020, V.108, P.110392, https://doi.org/10.1016/j.optmat.2020.110392, ***Q1.***

(2) A. Riha, M.E. Doroshenko, H. Jelinkova, M. Nemec, David Vyhlidal, M. Jelinek, J. Sulc, A.G. Papashvili, **N.O. Kovalenko**, I.S. Terzin, *4.19 μm Fe^{2+} Ions Lasing in $Zn_{1-x}Mn_xSe$:Cr^{2+},Fe^{2+} (x*

= *0.05) Single Crystal under 1.71 μm Laser Diode Pumping via* $Cr^{2+} \rightarrow Fe^{2+}$ *Ions Energy Transfer*, OSA Technical Digest (Optical Society of America, 2020), https://doi.org/10.1364/EUVXRAY.2020.JM3A.27.

(3) A. Riha, M.E. Doroshenko, H. Jelinkova, M. Nemec, M Jelinek, J Sulc, D Vyhlidal, **N.O. Kovalenko**, I.S. Terzin, *2.3-and 4.4-μm Lasing in Cr, Fe:* $Zn_{1-x}Mn_xSe$ *(x= 0.3) Single Crystal Pumped by Q-Switched Er: YLF Laser at 1.73 μm*, Physics of Wave Phenomena, 2020, V. 28, P. 231–235, https://doi.org/10.3103/S1541308X20030176, ***Q3***

(4) A. Riha, H. Jelinkova, M.E. Doroshenko, M. Jelinek, M. Nemec, **N.O Kovalenko**, I.S Terzin, *Mid-IR lasing of Fe2+ ions via Cr2+-> Fe2+ energy transfer process with YLF: Er or laser diode pumping at 1.7 μ,* Optical Materials Express, 2020, V. 10 (2), P. 662-673, https://doi.org/10.1364/OME.384392,***Q1***.

(5) M.E. Doroshenko, H. Jelinkova, A. Riha, M. Jelinek, M. Nemec, **N.O. Kovalenko**, A.S. Gerasimenko, *Mid-IR (4.4 μm)* $Zn_{1-x}Mn_xSe:Cr^{2+},Fe^{2+}$ *(x = 0.3) laser pumped by 1.7 μm laser using* Cr^{2+}*-*Fe^{2+} *energy transfer*, Optics Letters, 2019, V. 44 (11), P. 2724-2727, https://doi.org/10.1364/OL.44.002724, ***Q1.***