

INFORMAȚII PERSONALE

Nicolae Enachi



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POZIȚIA Concurs pentru funcția de membru al Consiliului ȘD, USM.

EXPERIENȚA PROFESIONALĂ

01/09/1980–01/11/1981	Cercetător Stagiar Universitatea de Stat din Moldova, Chisinau (Republica Moldova)
01/12/1981–14/01/1985	Doctorand Universitatea de Stat Lomonosv, Moscova (Rusia)
21/02/1985–01/01/1988	Cercetător Științific Institutul de Fizică Aplicată, Chisinau (Republica Moldova)
01/01/1988–01/12/1993	Cercetător Științific Superior Institutul de Fizică Aplicată, Chisinau (Republica Moldova)
07/07/1995–04/12/1998	Cercetător Principal Doi Laboratorul de Fizică Teoretică, Institutul de Fizică Aplicată, Magurele, București (România)
01/01/1994–01/12/2001	Cercetător Principal Institutul de Fizică Aplicată, Chisinau (Republica Moldova)
17/10/2001–06/06/2006	Șef de Laborator Optică Cuantică Institutul de Fizică Aplicată, Chisinau (Republica Moldova)
07/07/2006–Prezent	Șef de laborator Optică Cuantică și Procese Cinetice Institutul de Fizică Aplicată, Chisinau (Republica Moldova)
01/01/1999–06/07/2001	Profesor Conferențiar din Moldova, Chișinău. Universitatea de Stat din Moldova, Chișinău (Republica Moldova)
Prezent	Profesor Universitar Universitatea de Stat din Moldova, Chișinău (Republica Moldova)

EDUCAȚIE ȘI FORMARE

01/09/1975–06/07/1980	Student la Facultatea de Fizica
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Universitatea de Stat din Moldova, Chișinău (Republica Moldova)

01/12/1981–14/01/1985

Doctorand la Facultatea de Fizica din Moscova, Secția “Radiofizica”
Universității de Stat M. Lomonosov, Moscova (Rusia)

15/05/1985

Doctor în Fizica și Matematica (PhD similară cu Candidat în Științe Fizico-Matematice): Teza : Statistica cuantica a super-radiantei emenate de un sistem extins de radiatori.
Universitatea de Stat M. Lomonosov, Moscova (Rusia)

07/10/1993

Dr.Hab în Științe Fizice și Matematică (Dr. habilitatus), Denumirea Tezei: Fenomene cooperative cu un singur și doi fotoni în Optica.
Institutul de Fizică Aplicată, Chișinău (Moldova)

COMPETENȚE PERSONALE

Limba(i) maternă(e) română

Limbile străine

	ÎNȚELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
rusă		C2	C2	C2	C2
engleză		C2	C2	C2	C2
franceză	B2	B2	B2	B1	A1
spaniolă	A1	A1	A1	A1	A1

Niveluri: A1 și A2: Utilizator elementar - B1 și B2: Utilizator independent - C1 și C2: Utilizator experimentat
Cadru european comun de referință pentru limbi străine - Grila de auto-evaluare

Competențe de comunicare

Bine pregătit în experiența mea de profesor Universitar:

Cursuri în Universitatea de Stat din Moldova:

Optica Cuantica și Informatica Cuantica

Fizica Statistica și Termodinamica;

Teoria cuantica a câmpurilor,

Integrale pe traiectorii în Fizica modernă;

Statistica Cuantica la temperatura T diferită de zero

Electrodinamica mediilor continue.

Cursuri la Universitatea Dimitrie Cantemir de pe lângă Academia de Științe a Moldovei.

Teoria Corpului solid;

Metode de cuantificare

Mecanica Cuantica

Competențe organizatorice/manageriale

Specialitatea

Optica Cuantica, Radiofizica ce include și radiofizica cuantica

Sfera intereselor științifice

Interacțiunea radiației cu materia; Fenomene cooperative în optica cuantica și fizica cuantica. Bio-

fotonica și opto-genetica ca procesare a informației la nivel neuronal în bioinformatica. Optica Cuantica, Fizica Generatoarelor Cuantice de tip laser descrisa de stări neclasice ale luminii și emisiei cuantice.

Director de Proiecte Internațional și Instituționale:

1. Proiect Instituțional 2006-2010 „Particularitățile Efectelor Opticii Cuantice și Neliniare în Materiale Necristaline, Nano-structuri și Biosisteme” cifrul 06.408.013F; (contract de finanțare 207 din 24.04.2006);
2. Proiect Bilateral R. Moldova – R. Belarus 2010-2011 „Efecte cooperative mono- și bi-cuantice la rezonanță în cavități electrodinamice cuantice pentru procesarea cuantică a informației”, cifrul 10.820.05.04BF (Contractul de finanțare 04/BF din 01.04.2010).
3. Proiect R. Moldova - România 2013-2014 „Nanostructuri bidimensionale sintetizate prin tehnologii laser avansate pentru o nouă generație de implanturi, studii experimentale și teoretice” Hotărârea CSȘDT nr. 63 din 4 aprilie 2013 (contract de finanțare nr. 13.820.15.16/RoA).
4. Proiect R. Moldova-Italia 2015-2016 „Simulări și informatică cuantică pe atomi suprarăciți captați în capcane” Cifrul proiectului 15.820.18.02.04/It (contract de finanțare nr. 04/17 din 01 aprilie 2015)
5. Proiect STCU 6140, 2016-2018 Kiev, Ucraina „Optoelectronic effects in modernization of advanced implants” (Internațional 22 mii Eur) + cofinanțare locală 16.80013.5007.04/6140STCU. 22 mii Eur,
6. Proiect NATO SPS 2016-2019: NATO EAP.SFPP 984890 Energy - efficient decontamination by UV & cold plasma using metamaterials 350 mii Eur (200 mii Eur pentru R. Moldova și 150 mii pentru România)
7. Școala pentru tinerii cercetători NATO ASI 2010 “Technological Innovations in Detection and Sensing of Chem. -Bio-Radiological-Nuclear and Ecological Terrorism” 7-17 June 2010, Vila Verde, Chisinau, Moldova.
8. Proiect Instituțional 2015-2019 :Direcția strategică: "Materiale, tehnologii și produse inovative"(1602) Efecte ale opticii și cineticii cuantice în nanostructuri pentru informatică și biofonică” cifrul proiectului 15.817.02.07F.i cineticii cuantice în nanostructuri pentru informatică și biofonică” cifrul proiectului 15.817.02.07F.
9. Proiect de în Programul de Stat "Cooperativitate cuantică între emițatori (nuclee, atomi, puncte cuantice, molecule, biomolecule, metamateriale) și aplicarea acestora în informatică, bio-fonică avansată și optogenetică " 2020-2023.

Conducător de teze de doctorat:

- **2016, Marina Turcan, Thesis title** "Quantum Cooperative Aspects between the photons of Raman and hyper Raman emission"
- **2009 Nelu Ciobanu** “Ressonance Effects in the Process of interaction of Two quantum subsystems ”
- **2009. Elena Galeamov** “Non-exponential Spontaneous Emission and Resonance Fluorescence between the Undistinguishable Radiators.
- **2006, Vitalie Eremeev**, Thesis title: Cooperative effects in excited electronic systems on multiquantum interaction with bosonic field.
- **2005, Viorel Ciornea**, Thesis title: Two-photon emission in the processes of interaction of electromagnetic field with nonlinear media.
- **2001, Vlad Koroli**, Thesis title: Optical trapping and cooperative effects in interactions of photons and phonons with radiators.
- **1999, Mihai Macovei**, Thesis title: Cooperative two-photon effects in free space and optical cavities.
- **1992, Oleg Prepelita, Thesis title:** Cooperative two-quantum processes in multi-level optical systems and condensed materials.

Numarul total de publicatii mai mult de 200.

Most relevant publications:

A. Fundamental conception:

Enaki N.A. (2019) **Chapter title: Coherence Proprieties of Entangled Bi-Modal Field and Its Application in Holography and Communication, Book title: Quantum Cryptography in Advanced Networks, IntechOpen Books**

Enaki N.A. (2019) Chapter title: Cooperative Spontaneous Lasing and Possible Quantum Retardation Effects, Book title: Panorama of Contemporary Quantum Mechanics - Concepts and Applications, IntechOpen Books.

Enaki N., Profir A., Ciobanu N., Bazgan S., Nisteanu A., Turcan M., Starodub E., Paslari T., Ristoscu T., Badiceanu M. and Mihailescu I. (2018) "Optical metamaterials for decontamination of translucent liquids and gases", J. Phys. D: Appl. Phys., 51(38), 385101-12

"Efficient microbial decontamination of translucent liquids and gases using optical metamaterials"; Nicolae Enaki, Sergiu Bazgan, Andrei Nisteanu, Viorica Tonu, Mariana Turcan, Tatiana Paslari, Elena Starodub, Aurelia Profir, Gianina-Popescu-Pelin, Maria Badiceanu, Carmen Ristoscu, Ion N. Mihailescu; Chapter in "Advanced Surface Engineering Research", InTech, ISBN 978-953-51-6940-g, Ed. Mohammad Asaduzzaman Chowdhury, 2018

Enaki N.A. (2017) Peculiarities of Two-Photon Holograms of Nonlinear Quantum Optics and Their Connections with Detection Possibilities, in "Horizons in World Physics. Volume 291, Nova Science Publishers, NY, USA, Chapter 5, pp. 217-250. (partea teoretica)

Enaki N. Monograph Non-Linear Cooperative Effects in Open Quantum Systems: Entanglement & Second Order Coherence; Nova Sciences Sep 1, 2015; 355 pp.

Enaki N.A. (2015) Entanglement and Cooperative Effects between the Mode Components of Raman Process in Cavity and Their Analogy with Atomic Collective Effects chapter 2 in the Book "New Developments in Quantum Optics Research" Published by Nova Science Publishers Inc, NY, United States, pp. 51-97

Enaki N.A. (2015) In the Book "Superconductivity: Properties, Applications and New Developments", Editors: Paulette Grant, NOVA Science Publishers, New York, USA, 2015, Chapter 3, 41—90 p. ISBN 978-1-63483-907-5: "Possibilities of Manipulation of Critical Temperature in Superconductivity using Nonlinear Correlation Mechanisms between Cooper Carriers Stimulated by An-Harmonic Lattice.

Paslari T., Enaki N. 2016 "Energy transfer of non-equidistant radiators via the nonlinear excitation mechanism inside of an optical cavity " *Proc. SPIE* 10010, Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies VIII, 100100Q ; doi:10.1117/12.2243286

Enaki N, Rosca T, Phys. Script. , The nonlinear cooperative decay process of three-level systems stimulated by a thermal field and the generation of entangled photon pairs T160, 014011 (2014). DOI: 10.1088/0031-8949/2014/T160/014011

Nicolae Enaki and Marina Turcan, "Cooperative quantum correlations between Stokes and anti-Stokes modes in four-wave mixing" Phys. Scr. T153 (2013) 014021 (6pp) doi:10.1088/0031-8949/2013/T153/014021

N Ciobanu,, N A Enaki and M Orszag "Quantum beats and localization of two atoms in the subwavelength regime, 2013 J. Phys. B: At. Mol. Opt. Phys. 46 155501

Nicolae A Enaki " Three-particle cooperative emission in single- and two-photon exchanges through the vacuum field" Phys. Scr. T153 (2013) 014020 (7pp) doi:10.1088/0031-8949/2013/T153/014020

Nicolae A Enaki and Sergiu Bazgan "Exact solution for energy transfer between radiators localized in separate coupled cavities", Phys. Scr. T153 (2013) 014022 (6pp) doi:10.1088/0031-8949/2013/T153/014022

Nicolae A. ENAKI, Chapter 4. *Effective Hamiltonian and Master Equation for Nonlinear Collective Interaction of Electrons with Lattice Vibration in Superconductivity*; pp. 141-172 in the Hand Book „Magnetic Mechanism of Superconductivity in Copper Oxide” , *Nova Publishers*, 2011-2012.

N. A. ENAKI, ID: _11005_ Chapter **Title: "New Cooperative Effects in Single- and Two- Photon interactions of Radiators with Electromagnetic Bath"** in ID: _1830_ Book, Title: **Electromagnetic Fields: Principles, Engineering Applications and Biophysical Effects** , *Nova Publishers*,

N.A. Enaki" Mutual cooperative effects between single- and two-photon super-fluorescent processes through vacuum field" *Eur. Phys. J. D Volume* 66, Number 4, 21 p. (2012) DOI: <http://dx.doi.org/10.1140/epjd/e2012-20563-1>

Enaki N.A. "Mutual cooperative effects between single- and two-photon super-fluorescent processes through vacuum field" Nicolae A Enaki, **2012 J. Phys.: Conf. Ser.** **338** 012005 doi:10.1088/1742-6596/338/1/012005

Nicolae Enaki and Marina Turcan "Generation of photon pairs in hyper-Raman Effects and its connection with transitions symmetries", 2012 **J. Phys.: Conf. Ser.** **338** 012007 doi:10.1088/1742-6596/338/1/012007,

Nicolae Enaki and Sergiu Colun, Nonlinear effects in the theory of superconductivity, 2012 **J. Phys.: Conf. Ser.** **338** 012006 doi:10.1088/1742-6596/338/1/012006

ENAKI, N.A., TURCAN M., Cooperative Scattering Effect Between Stokes and Anti-Stokes Field Stimulated by a Stream of Atoms " **Optics Communications** , Volume 285, Issue 5, 1 March 2012, Pages 686-692

Nicolae A Enaki and Tudor Rosca "The exact quantum solution of N -radiators in cooperative interaction with a cavity field" 2012 **Phys. Scr.** **2012** 014011 doi:10.1088/0031-8949/2012/T147/014011

N Ciobanu, N A Enaki and M Orszag "Cooperative emission from two atoms localized in a standing wave field ", 2012 **Phys. Scr.** **2012** 014007 doi:10.1088/0031-8949/2012/T147/014007

ENAKI, N.A.; CIOBANU, N.; ORSZAG, M. Coherently controlled emission from two atoms dressed via a standing wave laser field. **J Phys B-At Mol Opt.** **2011**, **44**, 215502--215502-9. ISSN 0953-4075. doi: 10.1088/0953-4075/44/21/215502 (IF: 1,902).

ENAKI, N.A. Cooperative Two-Quanta Phase Transitions in Quantum Optics and Superconductivity. **Journal of Low Temperature Physics.** 2010, **Vol. 160**(5), 157-179.

ENAKI, N.A. Master equation and its Fokker-Planck representation in two quantum interactions of radiators with squeezed field. **Journal of Modern Optics.** 2010, **Vol. 57**(14), 1397 – 1407, (1362-1374). DOI: 10.1080/09500341003706813.

ENAKI, N.A.; GALEAMOV, E. Non-stationary solution for the density matrix with time dependent emission rates. **Il Nuovo Cimento B** , 7 p. 10.1393/ncb/i2010-10935-x , <http://dx.doi.org/10.1393/ncb/i2010-10935-x>

N. Enaki, N. Ciobanu, About Collapse and Revivals of Two Quantum Oscillators in Off-resonance Interaction, **Optics Communications**, **282** (9), 2009, p. 1825-1829 (Impact Factor – 1.57).

Enaki N., Galeamov E. Time evolution of spontaneous emission rate of two undistinguished radiators. În: **International Journal of Theoretical Physics.** 2008, vol. 47, nr 4, p. 911 – 927. (Impact Factor – 0.489) <http://www.springerlink.com/content/n1r45r70x162324m/>

Enaki N. A., Ciobanu N. Quantum trapping conditions for a three-level atom flying through bimodal cavity field. În: **Journal of Modern Optics.** 2008, vol. 55, nr.10, p.1557 – 1569. (IF - 1.074)

Ciobanu N., Enaki N.A. Temporal evolution of two quantum radiators at interaction with electromagnetic cavity field. În: **Journal of Physics, QTS Special Issue.** 2008, vol. 128, p. 012022 (IF - 1.68)

Enaki N., Galeamov E. Energy exchange between two atoms in the process of spontaneous emission. În: **International Journal of Control Theory and Applications.** 2008, vol. 1, nr 2, p. 103 – 116.

Ciobanu N., Enaki N *Nonresonant Evolution of Two Quantum Oscillators in Interaction* În: **International Journal of Control Theory and Applications.** 2008, vol. 1, nr 2, p. 117-125

Enaki N., Galeamov E. Collective resonance fluorescence of extended systems of cold atoms in the resonator standing wave. În: **Romanian Journal of Physics.** 2008, vol. 53, nr 5-6, p. 745 – 755. (Impact Factor – 0.2) http://www.nipne.ro/rjp/2008_53_5-6/0745_0755.pdf

N. Enaki, T. Roșca. Behavior of Three Quantum Radiators in Microcavity. În: **Romanian Journal of Physics.** 2008, vol. 53, nr 5-6, p. 713-723 (IF - 0.2)

Enaki N., Galeamov E. Non-locality in the process of spontaneous emission of two radiators without the dipole approximation. În: **Romanian Journal of Physics.** 2007, vol. 52, nr 5-6, p. 593 – 610. (Impact Factor – 0.2) http://www.nipne.ro/rjp/2007_52_5-7/0593_0611.pdf

Enaki, N.Ciobanu, *Quantum Entanglement State of Equidistant Three-Level Atom in Interaction with Bimodal Cavity Field*, **Romanian Journal of Physics**, **2007**, Vol. 52, Nos. 5–7, P. 545–55

N.A.Enaki, V.Eremeev "Specificity of Phase Transition of Quasi-Spin System in Two-Quantum Exchange with Thermostat" **Phys. Lett. A** **357**,), p.104-107. (2006)

N. Enaki and V. Eremeev, *Two-Photon Lasing Stimulated by Collective Modes*, **Optics Communications** **247** (2005), 381-392
naki N.A., Ciomea V.I., "The coherent generation of the photon pairs by stream of excited atoms passing through the cavity", **Physica A** **340**, 2004, pp. 436-443.

N. Enaki and V. Eremeev, *Phase-transition in superconductivity at two-phonon exchange between the electrons*, NATO Science Series – Vol. **166**, pp.635-639, edited by W. Greiner, M.G. Itkis, J. Reinhardt and M.C. Guclu, Kluwer Acad. Publ., The Netherlands, 2004

N.A. Enaki, V.I. Ciomea, D.L. Lin, "Trapping conditions for a three-level atom interacting with cavity fields" - Optics Commun. **226**, 285, (2003).

N.A. Enaki and V. Eremeev, *Two-phonon cooperative phenomena in superconductivity*, New Journal of Physics **4**, pp. 80.1-80.12 (2002).

■ Cited by: Z. Bak, *Coupling of Electrons to the Multiphonon Complexes and its Relevance to Superconductivity*, Czechoslovak Journal of Physics 54, 461-464 (2004)

N.A.Enaki, V.I. Ciomea, "Enhanced generation rate of the coherent entanglement photon pairs in parametrical down conversion", J. Phys. A: Math. Gen. 34, 4601 (2001).

N.A.Enaki, M.A. Macovei, "Resonance two-photon interaction of radiators with the broadband squeezed field", J. Phys. B: At. Mol. Opt. Phys. 33, 2163 (2000).

A.M. Andriesh, **N.A. Enaki**, V.I. Karoli, I.P. Culeac, Generation of coherent phonon pulses by hot electrons in non-crystalline semiconductors- J. of Optoelectronics and Advanced Materials, **2**, pp.. 643-647 (2000).

N.A.Enaki, M.A. Macovei, *Two-photon cooperative decay in a cavity in the presence of a thermalized electromagnetic field*, JETP 88, 633 (1999) [Zh. Eksp. Teor. Fiz. 115, 1153 (1999)]. Cited by 8.

N.A. Enaki, V.I Karoli, *Trapping of three-level atoms interacting with single-mode cavity field*, J. Optical. Society of America **16**, 2783 (1999).

Site by: LX Xia, GJ Yang "Coherent trapping of a three-level atom in a circularly polarized light" - Optics Communications, **257**, pp. 298-305 (2006)

N.A.Enaki, V.I.Karoli, *Trapping phenomenon in equidistant three-level system interacting with cavity field*, Journal of Optoelectronics Laser 9, 369 (1999).

N.A.Enaki, M.A.Macovei, *Amplitude-squared squeezing in two-photon resonance fluorescence*, Optics Communications 157, 291 (1998).

N.A. Enaki, M.A. Macovei, D. Mihalache, *Cooperative two-photon interaction with nonclassical light*", Physica A 258,383 (1998).

Enaki N.A., Karoli V.I., *Dynamics of an M-level equidistant radiator in the presence of thermal electromagnetic field*, J.of Phys.B: At. Mol. Opt. Phys., 31, 3583 (1998).

Site by: Font J.L.; Fernández-Soler J.J.; Vilaseca R.; Gauthier Daniel J., *Multiphoton lasing in atomic potassium: Steady-state and dynamic behavior*, Physical Review A, vol. 72, 063810, 2005

N.A Enaki, M.A Macovei, "Cooperative emission in the process of cascade and dipole-forbidden transitions", Phys. Rev. A 56, 3274 (1997).

Site by: A.A Kalinkin, A.A Kalachev, V.V. Samartsev, *Multipulse regimes of excitation of optical superradiance due to a two-photon transition*, Optics and Spectroscopy, . **96**, No. 5, 2004, pp. 734–741

N.A. Enaki, D. Mihalache, *Two-photon cooperative emission in the presence of a electromagnetic field*, Hyperfine Interactions **107**, 333 (1997).

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■ Y Cheng, B Xia in Gamma Standing Wave in the Photonic Crystal of Resonant Rh Nuclei , Arxiv preprint arXiv:0711.2776, 2007 - arxiv.org

N.A.Enaki " *The dynamics of spontaneous decay on short and long time scales*, Zh. Eksp. Teor. Fiz. 109, 1340 (1996) [Sov. Phys. JETP 82 607 (1996)]

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■ DJ Berkeland, DA Raymondson, VM Tassin - Physical Review A, 2004

■ DJ Berkeland, DA Raymondson, VM Tassin Tests for nonrandomness in quantum jumps- Physical Review A, Phys. Rev. A 69, 052103 (2004) [4 pages]

■ P. Facchi, S. Pascazio, *Temporal behavior and quantum Zeno time of an excited state of the hydrogen atom*, Phys Lett. A 241 (1998) 1391144, etc

P.I. Bardetski, N.A. Enaki, D. Mihalake, *The induced phase transition of nonlinear oscillator interacting with a coherent electromagnetic field*, Zh. Eksp. Teor. Fiz., 110, 1186 (1996) [Sov. Phys. JETP 83, 653 (1996)].

A.M Andriesh, N.A.Enaki, V.A. Binchevici, T. Copaci, I.P Culeac "The mechanism of enhancement of photoinduced absorption in As_2S_3 glass at sub-bandgap illumination"- Journal of Non-Crystalline Solids , **189**, p. 147-153 (1995),

NA Enaki,, OB Prepelitsa, *Collective two-photon absorption of a squeezed electromagnetic field* –Sov. Phys.: Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki- - Soviet physics, JETP, **74**, pp. 23-30 (1992).

P.I. Bardetkii, **N.A. Enaki** *Effect of sample geometry on the evolution of the superradiance process* - Optics and spectroscopy, **72**, pp. 829-834 (1992).

AM Andriesh, OI Bogdan, **NA Enaki**, IA Cojocaru, VN *Optical hysteresis and nonlinear absorption of laser pulses in chalcogenide glasses*- Bull. Russ. Acad. Nauk., Phys. Ser, 1992

N.A. Enaki, O.B. Prepelitsa, *Collective two-photon processes in the presence of a thermal electromagnetic field* - Theoretical and Mathematical Physics, **88**, pp.967-976 (1991).

N.A. Enaki, O.B. Perpelitsa *Two-photon emission and absorption in the presence of a thermalized electromagnetic field* - Optics and spectroscopy, **69**, pp. 367-369 (1990)

N.A. Enaki "The photon quantum statistics in the processes of two quanta optical nutation" Sov. Phys.: Zhurnal Exp. Teor. Fiz (ЖЭТФ), том **98**, pp.. 783-796 (1990).

NA Enaki, *Collective resonance fluorescence of extended two-level media*, - Sov. Phys. Optics and Spectroscopy, **66**, .629-633 (1989)

N. A Enaki, *Superradiance in two-photon spontaneous emission* , Sov. Phys. JETP **67**, 2033 (1988) [J.. Exp. i Teor. Fiz. **94**, 135(1988)].

N.A. Enaki "Role of collective processes in the absorption of an external laser field in two-level media"- Optics and Spectroscopy, **64**, pp.15-18, (1988)

A.M. Andriesh, **N.A. Enaki**, I.A.Cojocaru, N.D.Ostafeichuc Optical hysteresis in amorphous semiconductor - Sov JTF Letters, 1988

N.A. Enaki, Y.M. Shvera *Collective superfluorescence of three-level systems stimulated by intense laser field*- Sov.J., Optics and Spectroscopy, **65**, pp.272-275 (1988)

A V Andreev, N A Enaki, Yu I Il'inskii, "Role of delay in superradiance kinetics", SOV J QUANTUM ELECTRON, **15** (2), 176-180 (1985).

A.V. Andreev, **N.A. Enaki**, Y.A. Il'inskii , Superfluorescence in a three-level system – Sov. Phys. Transl. "Theoretical and Mathematical Physics **64:3**, pp. 960-964, (1985) (pub. Date 1986)

A.V.Andreev,, **NA Enaki**, lu..A. Ilinskii "The role of quantum fluctuations in the superradiative decay of an extended system" - Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki, **87**, p. 400-407 (1984)

Site by: ÖE Müstecaplıoğlu, L You "Superradiant light scattering from trapped Bose-Einstein condensates"- Physical Review A **62**, 063615 (2000)

N.A. Enaki, Y.A. Ilinsky, "Retardation in the superradiance process" – Sov. Phys. Optics and Spectroscopy, **58**, pp.71-73 (1985)

RV Arutyunyan, **NA Enaki**, YA Ilinskii "Collective delay of superradiance decay"- Optics and Spectroscopy, **58**, pp.154-156 (1985)

R.V. Arutyunyan, **N.A. Enaki**, Y.A. Ilinskii, *Splitting of a chain of equations for superradiance of a two-level system*, - Optics and Spectroscopy, **58**, 151-154 (1985)

R.V. Arutyunyan, **N.A. Enaki**, Y.A. Il'inskii "A modified equation for single-mode superradiance kinetics" – Sov. Phys. Radiophysics and Quantum Electronics, **27**, pp. 20-24(1984)

GM Shmelev, **NA Enaki** "Conductivity of a superlattice during electron scattering by optical phonons"- Russian Physics Journal, **25**, pp. 78-81 (1982).

GM Shmelev, **NA Enaki**, G.I. Turcan "Conductivity in semiconductors with super lattice in processes of non elastic scattering of carriers" Ukraine Physics Journal., **N 3**, pp.. 458-461 (1982)

I.A Chaicovskii, G.M. Shmelev, N.A.Enaki " *Light absorption in semiconductors with superlattice in quantizing magnetic field*" 1981, Phys. Stat. Sol. (b), **108**, p. 559-566 (1981)

Applications optical engineering in biophysics, medicine and computing:

N.Enaki, S.Bazgan, T. Pislari, C.Ristoscu, M.Turcan A.Vasehta, Mihailescu I.N. & N. Enaki, "Improvement in Ultraviolet Based Decontamination rate Using Meta-materials", Applied Surface Science, 14 pp., 2017. (Impact Factor: 4.387).

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