

## CURRICULUM VITAE

### PERSONAL DATA:

**Name:** Alexander V. Kukhta  
**Date of Birth** 31st December, 1950  
**Place of Birth** Vitebsk Region , Belarus, USSR  
**Nationality:** Belarus  
**Marital Status:** Married  
**Business address:** Belarusian State University, Research Institute for Nuclear Problems, 11 Bobruiskaya Str., app. 302, 220030 Minsk, Belarus  
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h-index (SCOPUS) = 10

### EDUCATION:

- Ph.D. in Physics (Candidate of Science in Phys. and Math.), 1987, Inst. of Physics, Belarus Academy of Science, Minsk, Belarus. Thesis title: “Luminescence of free complex molecules under excitation by fast electrons”
- M. Sc. in Physics, June 1979, Belarus State University, Physical Department, Minsk, Belarus. Subject of examination: General Physics, Optics, Laser Physics

### EXPERIENCE:

#### **Institute of Physics, National Academy of Sciences, Minsk, Belarus**

08/1979 – 03/1992 (Junior Researcher, Researcher).

#### **Institute of Molecular and Atomic Physics, National Academy of Sciences, Minsk, Belarus**

03/1992 – 07/2007 ( Researcher, Senior Researcher, Head of Department),

#### **Institute of Physics, National Academy of Sciences, Minsk, Belarus**

07/2007 – 03/2010 (Leading Researcher).

#### **Nanyang Technological University, Singapore, Singapore**

07/2011 – 07/2012 (Research Fellow).

#### **Institute for Nuclear Problems, Belarus State University, Minsk, Belarus**

09/2012 – *Present* (Leading Researcher)

### **Specialization (*specify*)**

(i) **main field** transformation of energy in organic and organic-inorganic nanostructures

(ii) **other fields** interaction of light and electrons with molecules and nanostructures

(iii) **current research interest**

1. Cathodo- and electroluminescence of organic nanostructures and nanocomposites. 2. Photovoltaics, supercapacitors and sensors based on organic and organic-inorganic materials. 3. Electrical conductivity and electron transport in organic materials (bulk, thin films, monolayers), and organic-inorganic nanocomposites (thin films). 4. Plasmonics. 5. Physics of interaction of electrons with organic electroactive substances in the gas, liquid and solid (ordered and disordered) states; transformation of electron energy by organic molecules; formation of excited molecules, cations and anions

Materials and devices for application in electronics on the basis of organic, nanocarbon and organic-inorganic nanostructures.

## **Honours, Awards, Fellowships, Membership of Professional Societies**

- Who is Who in the World, 2010.

## **INTERNATIONAL RESEARCH GRANTS (on current research activity):**

- 
- Fundamental and Applied Electromagnetics of Nano-Carbons, EU FP7 project FP7- 318617 FAEMCAR, Call ID FP7-PEOPLE-2012-IRSES, 2012-2017, Principal Researcher: Ph. Lambin (Facultes Universitaires Notre-Dame de la paix de Namur, Belgium).
- Nano-Thin and Micro-Sized Carbons: Toward Electromagnetic Compatibility Application, project FP7-610875 NAMICEMC, Call ID FP7-PEOPLE-2013-IRSES, 2013-2017, Principal Researcher: A. Celzard (ENSTIB, Universite de Lorraine, Epinal, France).
- Collective Excitations in Advanced Nanostructures Project ID 644076 Call H2020-MSCA-RISE-2014 Programme H2020 CoExAN .

## **PLENARY AND INVITED TALKS:**

1. A.V.Kukhta. Organic-inorganic nanocomposites and their applications. Int. Symp. "Nanoscience advances in CBRN agents detection, information and energy security", 29 May – 6 June, 2014, Sozopol, Bulgaria.
2. A.V.Kukhta, Optical and Electrophysical Properties and Applications of organic and Organic-inorganic Materials and Thin Film nanostructures. 1 Int. Conference on Functional Materials for Defense, 18-20 May 2012, Pune India.
3. A.V.Kukhta, E.E.Kolesnik, A.I.Lesnikovich, M.N.Nichik, S.A.Vorobyova, A.P.Lugovskii, V.Erokhov. Preparation and some characteristics of polyepoxypropylcarbazole thin films with embedded Ag-Au nanoparticles. Int. Symp. on Functionalized Nanoscale Mater., Devices, and Systems for chem.-bio Sensors (4-15 June 2007, Sinaya, Romania).
4. A.V. Kukhta, E.E. Kolesnik, A.I. Lesnikovich, M.N. Nichik, A.N. Kudlash, S.A. Vorobyova. Organic-inorganic nanocomposites: optical and electrophysical properties. Int. Conf. on Nano-Materials for Electronics (November 27-29, 2006, Pune, India).
5. A.V.Kukhta. Transport of low-energy electrons in thin organic films. 5 Int. Conf. on electronic processes in organic materials (24-29 May, 2004, Kiev, Ukraine).

## **PUBLICATIONS**

### **Books:**

1. A.V.Kukhta, E.E.Kolesnik, A.I.Lesnikovich, M.N.Nichik, S.A.Vorobyova, A.P.Lugovskii, V.Erokhov. Preparation and some characteristics of polyepoxypropylcarbazole thin films with embedded Ag-Au nanoparticles. In: "Nanostructured Materials For Advanced Technological Applications. NATO Science for Peace and Security Series B: Physics and Biophysics", Eds.: J.P. Reithmaier, P. Petkov, W. Kulisch, C. Popov, Springer, Netherlands. – 2009. – P. 223-226.
2. A.V.Kukhta. Organic-inorganic nanocomposites and their applications. In: "Nanoscience advances in CBRN agents detection, information and energy security", Chapter 22, Eds.: J.P. Reithmaier, P. Petkov, W. Kulisch, C. Popov, Springer, Netherlands. – 2015. – 207-225.
3. T.S. Kavetsky, O. Sausa, T. Petkova, V. Boev, P. Petkov, A.V. Kukhta, A.L. Stepanov. Doppler broadening of the annihilation line study of organic-inorganic hybrid Ureasil-based composites. In: "Nanoscience advances in CBRN agents detection, information and energy security", Chapter 9, Eds.: J.P. Reithmaier, P. Petkov, W. Kulisch, C. Popov, Springer, Netherlands. – 2015. – 85-90.

### **List of publications, since 2000 (on molecular and nanoscience)**

1. I. Karbovnyk, I. Olenych, I.N.Kukhta, A. Lugovskii, G. Sasnouski, T. Chutora, A. Luchechko, I. Khalakhan, A.V. Kukhta. Electric Field Oriented Nanostructured Organic Thin Films with Polarized Luminescence. Nanoscale Research Letters (in press).

2. A.V.Kukhta, A.G.Paddubskaya, P.P.Kuzhir, S.A.Maksimenco, S.A.Vorobyova, S.Bellucci, P.K.Khanna. Electroactive polymer based conducting, magnetic, and luminescent composites. *Advances in Science and Technology* v. 97 (2016) 24-29.
3. A.V.Kukhta, A.G.Paddubskaya, P.P.Kuzhir, S.A.Maksimenco, S.A. Vorobyova, S. Bistarelli, A.Cataldo, S.Belucchi. Copper nanoparticles decorated graphene nanoplatelets and their polymer composites. *Synth.Met.* (2016), <http://dx.doi.org/10.1016/j.synthmet.2016.10.006>.
4. L.G. Samsonova, R. Valiev, K.M. Degtyarenko, T.N. Kopylova, A.V. Kukhta, D. Sunchugashev. Experimental and Theoretical Study of Photo- and Electroluminescence of Divinyldiphenyl and Divinylphenantren Derivatives. *Spectrochimica Acta A* 173 (2016) 59-64.
5. I. Karbovnyk, I. Olenych, A. Kukhta, A. Lugovskii, G. Sasnouski, L. Yarytska, Yu. Olenych, A. Luchechko, A.I. Popov, L. I. Yarytska. Multicolor emission from organic thin films on different substrates. *Rad. Measurements* 90 (2016) 38-42.
6. Л.И. Самсонова, К.М.Дегтяренко, Т.Н.Копылова, А.В. Палатова, А.В.Кухто. Фото- и электролюминесценция производных дивинилдобензотиофенсульфона. *Известия ВУЗов, Физика.* №4 (2016) 110-113.
7. А.В. Кухто, А.В. Мисевич, А.Е. Почтенный. Электрические свойства пленочных структур на основе графена. *Труды БГТУ* №6 (188) (2016) 81-85.
8. A.V.Kukhta, T.N.Kopylova, P.M.Gadirov, I.N.Kukhta. Optical and electroluminescent properties of new divinylidibenzthiophenesulphone derivatives. *Optics and Spectroscopy.* 120 (2016) 245-252.
9. A. Hubarevich, A. Kukhta, H.V. Demir, X. Sun, and H. Wang. Ultra-thin broadband nanostructured insulator-metal-insulator-metal plasmonic light absorber. *Optics Express* 23 (2015) 9753-9761.
10. O. Sarapulova, V. Sherstiuk, V. Shvalagin, A. Kukhta. Photonics and nanophotonics and communication technologies in modern food packaging. *Nanoscale Research Lett.* 10 (2015) 1-8.
11. A. Kukhta, A.Avchinnikova. Thin films based on copper nanoparticles decorated graphene nanoplatelets: optical and electrophysical properties. In: *Physics, Chemistry and Applications of Nanostructures.*(2015) P.229-232.
12. A.Kukhta, G. Ivlev, S.Prakopyev, A.S.Egorov. Formation of carbon thin films by laser ablation of graphite. In: *Physics, Chemistry and Applications of Nanostructures.* (2015) p. 346-349.
13. A. V. Kukhta, A. E. Pochtenny, A. V. Misevich, I. N. Kukhta, E. M. Semenova, S. A. Vorobyova, and E. Sarantopoulou. Optical and Electrophysical Properties of Nanocomposites Based on PEDOT: PSS and Gold/Silver Nanoparticles. *Physics of the Solid State,* 56 (2014) 827-834.
14. A.V. Kukhta, P.P.Khanna. Optical sensing of nanocomposites consisting of PEDOT:PSS and functionalized gold nanoparticles. In "Physics, Chemistry and Application of Nanostructures, Reviews and Short Notes to Nanomeeting-2013", Eds. V. E. Borisenko, S. V. Gaponenko, V. S. Gurin, C.H.Kam, World Scientific Publ., 2013, 242-245.
15. A.V. Kukhta, A. Hubarevich, D.Wang, X.W. Sun, H.V.Demir. A broadband plasmonic light absorber. In "Physics, Chemistry and Application of Nanostructures, Reviews and Short Notes to Nanomeeting-2013", Eds. V. E. Borisenko, S. V. Gaponenko, V. S. Gurin, C.H.Kam, World Scientific Publ., 2013, 222-225.
16. A.V.Kukhta. *Organic Electronics: Yesterday, Today, Tomorrow* (in Russian). *Chemistry and Life* (Moscow), No2 (2013) 2-6.
17. S.A. Pshenichnyuk, N.L. Asfandiarov, A.V. Kukhta. Interruption of the inner rotation initiated in isolated electron-driven molecular rotors. *Physical Review A* 86, 052710 (2012).
18. P. Stakhira, S. Khomyak, V. Cherpak, D. Volyniuk, J. Simokaitiene, A. Tomkeviciene, N.A. Kukhta, J.V. Grazulevicius, A.V. Kukhta, X.W.Sun, H.V. Demir, Z. Hotra, L. Voznyak. Blue organic light-emitting diodes based on pyrazoline phenyl derivative. *Synthetic Metals,* (2012) vol. 162, no. 3-4, pp. 352-255, 2012.
19. V.V. Cherpak, P.Y. Stakhira, D.Yu. Volyniuk, J. Simokaitiene, A. Tomkeviciene, J.V. Grazulevicius, A. Buciskas, V.M. Yashchuk, A.V. Kukhta, I.N. Kukhta, V.V. Kosach, Z.Yu. Hotra, 3,6-Di(9-carbazolyl)-9-(2-ethylhexyl)carbazole based single-layer blue organic light emitting diodes *Synth. Met.* 161 (2011) 1343-1346.
20. S.A.Pshenichnyuk, A.V.Kukhta, I.N.Kukhta, A.S.Komolov. Spectroscopic states of PTCDA negative ions and their relation with density maxima of conductance zone vacant states. *Journal of Technical Physics* 81 (2011) 8-13.
21. A.V.Kukhta, I.N.Kukhta, S.N.Salazkin. Polydiphenylenephthalides: spectroscopy and DFT calculations. *Materials Science,* 17 (2011) 266-270.
22. A.V.Kukhta, E.E.Kolesnik, I.N.Kukhta, A.E.Pochtenny, V.K. Dolgiy, G.A. Mousdis, N. Psaroudakis. Optical and electrophysical properties of sulfur containing metal free phthalocyanine, *Synth. Met.* 160 (2010) 2361-2365, doi:10.1016/j.synthmet.2010.09.012.
23. S.A.Pshenichnyuk, A.V.Kukhta, I.N.kukhta, N.L.Asfandiarov. Resonance electron capture by some electroactive molecules. *Russian Chem. Phys.* 29, N11. P. 82-96. -2010.

24. T.N.Kopylova, A.V.Kukhta, E.E.Kolesnik, I.N.Kukhta, K.M.Degtyarenko, N.S.Eremina, R.M.Gadirov, L.G.Samsonova, G.V.Mayer, V.K.Olkhovik, N.A.Galinovskii, V.E.Agabekov. Spectral and electroluminescent properties of divinylbiphenyl derivatives. *Nanotechnologies in Russia*, 5, N7-8 (2010) 543-548.
25. A.V.Kukhta, E.E.Kolesnik, I.N.Kukhta, A.N. Lachinov, S.N. Salazkin. Spectral and luminescent properties and structure of polydiphenyleneophthalide (in Russian). *Nanotechnologies: science and technology (Russia)* N2 (2010) 49-56.
26. A.V.Kukhta. Organic Electronics: presence and perspectives (in Russian). *Nanotechnologies: science and technology (Russia)* N2 (2010) 77-80.
27. A.V.Kukhta, I.N.Kukhta, E.E.Kolesnik, V.Olkhovik, N.A.Galinovskii, G.K.Javnerko. Spectroscopic and morphological properties of dibenzoxazolylbiphenyl thin films, *J. Fluorescence* – 2009. V.19. – P. 989-996. (DOI: 10.1007/s10895-009-0498-3).
28. A. V. Kukhta, I. N. Kukhta, A. N. Zavilopulo, A. S. Agafonova, O.B.Shpenik. Ionization of 4,4'-di(phenylethynyl)anthracene by electron impact, *Eur. J. Mass Spectrom.* . – 2009. – V. 15. N. 5. P. 563—570.
29. S.A.Pshenichnyuk, A.V.Kukhta. Electron capture spectroscopy for study of electronic structure of organic semiconductor molecules in organic glasses (in Russian). *Nanotechnologies: science and technology (Russia)* 3 (2009) 82—90.
30. A.V.Kukhta. Elementary processes of interaction of low-energy electrons with organic electroactive molecules (in Russian). *Nanotechnologies: science and technology (Russia)* 3 (2009) 34—41.
31. A.V.Kukhta, Interaction of electrons with organic electroactive compounds (in Russian). In: *Electronic processes in solid states*. Ufa (Russia), 2009, 21-32.
32. L.G.Romanova, A.V. Kukhta, A.N. Zavilopulo, A.S.Agafonova, O.B. Shpenik. Dissociative ionization of a POPOP molecule. *Int. J. Mass Spectrom.* 279 (2009) 10-14.
33. A.V. Kukhta, I.N.Kukhta, O L Neyra, E Meza. DFT study of the energy structure of anthracene derivatives in their neutral, anion and cation forms. *J.Phys. B* 41 (2008) 205701.
34. A.V.Kukhta, I.N.Kukhta, E.E.Kolesnik, E.Dudko, V.A.Tolkachev, V.Olkhovik, N.A.Galinovskii, K.A.Osipov, V.N.Pavlovskii. Effect of temperature and oxygen on luminescence polarization of dibenzoxazolylbiphenyl thin films. *J. Fluorescence* 18 (2008) 633-637.
35. L.G.Romanova, A.N. Zavilopulo, O.B. Shpenik, A.V. Kukhta, A.S.Agafonova. POPOP molecule fragmentation under ionization by electron impact. *J.Appl. Spectrosc.* 75 (2008) 482-489.
36. E.V. Dudko, I.I. Kalosha, A.V. Kukhta, I.N. Kukhta, V.A. Tolkachev, V.K. Olkhovik, D.A. Vasilevskii. Anomaly of oxygen quenching of electron excited states in 4,4'-bis(benzoxazole-2-vinyl)biphenyl vapors. *J.Appl.Spectrosc.* 75 (2008) 902-905.
37. A.V. Kukhta, I.N.Kukhta, S.M. Kazakov, O.V.Khristophorov, O.L.Neyra. Interaction of low-energy electrons with linear biphenylethynyl derivatives. *J.Chem.Phys.* 127 (2007) 084316.
38. A.V.Kukhta, E.E.Kolesnik, A.L.Gurskii, E.V.Lutsenko, K.A.Osipov, V.N.Pavlovskii, U.V.Grazulevicius, A.Nedelcheva, I.K.Grabchev. Radiating properties of thin films of electroactive doped polymers. *J.Appl.Spectrosc.* 74 (6), 2007, 820-825.
39. A.V.Kukhta, I.N.Kukhta, E.E. Kolesnik, V.K.Olkhovik, N.A.Galinovskii, V.E.Agabekov, S.M. Kazakov, V.Andreev. Electroluminescence of dibenzoxazolylbiphenyl. *J.Appl.Spectrosc.* 74 (2007) №5, 684-687.
40. A.V. Kukhta, E.E. Kolesnik, A.I. Lesnikovich, M.N. Nichik, A.N. Kudlash, S.A. Vorobyova. Organic-inorganic nanocomposites: optical and electrophysical properties. *Synth. & Reactivity Inorg. Metal-Org. Nano-Metal Chem.* 37 (2007) 333-339.
41. M.N. Nichick, S.A. Vorobyova, A.I. Lesnikovich, A.V.Kukhta, E.E. Kolesnik. Preparation and some characteristic of colloidal dispersions and thin films containing Ag-Au nanoparticles, in “Physics, Chemistry and Application of Nanostructures, Reviews and Short Notes to Nanomeeting-2007”, Eds. V. E. Borisenko, S. V. Gaponenko, V. S. Gurin, World Scientific Publ., 2007, 336-339
42. A.N. Kudlash, S.A. Vorobyova, A.I. Lesnikovich, A.V.Kukhta, E.E. Kolesnik. Zinc sulfide colloidal dispersions prepared via interphase synthesis and their optical properties, in “Physics, Chemistry and Application of Nanostructures, Reviews and Short Notes to Nanomeeting-2007”, Eds. V. E. Borisenko, S. V. Gaponenko, V. S. Gurin, World Scientific Publ., 2007, 320-323.
43. A.N. Kudlash, S.A. Vorobyova, A.I. Lesnikovich, A.V.Kukhta, E.E. Kolesnik. Optical properties of cadmium sulfide colloidal dispersions prepared by interphase synthesis. *Opt.Materials* 30 (2008) 1304–1309.
44. A.V.Kukhta, I. Kukhta, E. Kolesnik, A.Lugovskii, O. Neyra, A.E. Meza. Optical Properties of Thiol Terminated Biphenyloxazole Ordered Monolayers on Gold Surface. *Appl. Surf. Sci.* 254 (2007) 116-119.
45. A.V. Kukhta, I.N.Kukhta, S.A.Bagnich, S.M. Kazakov, V.Andreev, O.Neyra, E.Meza. Interactions of low--energy electrons with Ir(ppy)<sub>3</sub> in the gas phase. *Chemical Physics Letters* 434 (2007) 11-14.
46. A.V.Kukhta. Formation of electron excited states in ultra thin Alq<sub>3</sub> films irradiated by free electrons. *J.Appl.Spectrosc.* 73 (2006) 786-791.

47. A.V.Kukhta, E.E.Kolesnik, I.K.Grabchev, S.A.Sali – Electroluminescence of 1,8-naphthalimide containing polyvinylcarbazole. *J. Fluorescence* 16, N3 (2006) 375-378
48. S.A.Pshenichnyuk, N.L.Asfandiarov, A.V.Kukhta – Capture of low-energy electrons by molecules of 9,10-phenanthrenequinone and 2,7-diiodinefluorenone: evolution of long-lived negative molecular ions. *Russian Chem.Phys.* 26 (2007) 5-13.
49. A.V. Kukhta, E.E. Kolesnik, A.I.Lesnikovich, M.N.Nichick, D.V.Ritchik, S.A.Vorobyova – Optical and Electrophysical properties of Ag-PEPC nanocomposites. *Mat. Sci. Eng.: C* 26 (2006) 1012-1016.
50. A.V.Kukhta – “Transport of low-energy electrons in thin organic films” (review). *Molecular Crystals & Liquid Crystals*, 427 (2005) 71-93.
51. Sung-Hee Son, Je-Jung Yun, Gwang-Chae Oh, Sang-Yun Jung, Young-Kun Kim, A.V. Kukhta, V.K. Olkhovik, G. Sasnouski, Eun-Mi Han. Electroluminescence characteristics of a novel biphenyl derivative with benzoxazole for organic light-emitting diodes. *Current Applied Physics* 5 (2005) 75–78.
52. A.V.Kukhta, E.E.Kolesnik, D.V.Ritchik, A.I.Lesnikovich, M.N.Nichick, S.A.Vorobyova. “Effect of Ag nanoparticles on electroluminescence of thin film organic materials”. In: *Physics, Chemistry and Application of Nanostructures*, Eds. V.E.Borisenko, S.V.Gaponenko, V.S.Gurin, 2005, 96-99.
53. N.A. Borisevich, A.I.Ivanov, S.M. Kazakov, A.V. Kukhta, A.I. Mitkovets, D.V. Murtazaliev, O.V. Khristoforov, V.A. Povedailo - “Interaction of electrons with indole, triptofan and their derivatives in the gas phase”, *J.Appl.Spectroscopy*, 72, №4 (2005) 468-472.
54. A.V. Kukhta, A.I.Mitkovets, D.V. Ritchik. “Polarized fluorescence of complex molecules under excitation by low-energy electrons”. *J.Appl.Spectroscopy* 71 (2004) 512-515.
55. A.V. Kukhta, E.E. Kolesnik, D.V.Ritchik, V.V. Galkin, I.I.Zholnerevich. “A numerical analysis of processes in organic thin film electroluminescent structures with metal nanoparticles”. *Journal of Optoelectronics and Advanced Materials*, 2 (2004) 405-412.
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57. N.A. Borisevich, S.M. Kazakov, A.V. Kukhta, A.I.Ivanov, V.Andreev, O.V. Khristoforov Electron energy losses in fluorene and fluorenone and diiodinefluorenone. *Journal of Applied Spectroscopy* 71 (2004) 628-632.
58. A.V.Kukhta, E.E.Kolesnik, A.Lappo, A.E.Pochtenny, I.K.Grabchev. Electrical and Luminescence Properties of a Poly(amidoamine) Dendrimer Containing Naphthalimide, *Physics of the Solid State*, 46 (2004) 2306-2310.
59. A. V. Kukhta, S.M. Kazakov, D.V. Murtazaliev, D.V. Ritchik Interactions of low-energy electrons with organic electroactive compounds. *Chemical Physics Letters*, 373 (2003) 492-497.
60. A.V. Kukhta, D.V. Ritchik, N.L. Asfandiarov, V.S. Fal'ko, V.G. Lukin, S.A. Pshenichnyuk, “Long-lived negative ion formation by Alq<sub>3</sub>,” *International Journal of Mass Spectrometry* 230/1 (2003) 41-44.
61. A.V. Kukhta Electroluminescence of thin films of organic compounds (Review). *Journal of Applied Spectroscopy*, 70 (2003) 165-194.
62. A. V. Kukhta, E.E.Kolesnik, D.V.Ritchik. Calculation of full electron scattering cross section on complex polyatomic organic molecules (in Russian). *Proc. Belarusian Academy*, 1(15)/4 (2003) P. 17-19.
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64. A. V. Kukhta, G. G. Gorokh, E. E. Kolesnik, A. I. Mitkovets, M. I. Taoubi, Yu. A. Koshin and A. M. Mozalev, Nanostructured alumina as a cathode of organic light-emitting devices, *Surface Science*, V.507-510, (2002) P.593-597.
65. N.A. Borisevich, S.M. Kazakov, A.V. Kukhta, D.V. Murtazaliev, Spectral and luminescent properties of oxazoles and oxadiazoles in the gas phase under excitation by electrons, *J. Appl. Spectrosc.*, 69 (2002) p.166-171.
66. A.V. Kukhta, E.E. Kolesnik, V.V. Galkin, I.I. Zholnerevich, Stimulated radiation conditions in thin film organic electroluminescent structures. *J. Appl. Spectrosc.* 69 (2002) 318-323.
67. A.V. Kukhta, S.M. Kazakov, E.E. Kolesnik, A.I. Mit'kovets, D.V. Murtazaliev, G. Sorokin, Transformation of Energy in Some Laser Dyes Under Excitation by Electrons. *Proc. SPIE* 4747 (2002) 224-229
68. A.V. Kukhta, E.E. Kolesnik, M.I. Taoubi, V.V. Galkin, I.I. Zholnerevich, Modeling of electroluminescence of thin organic films. *J. Appl. Spectrosc.* 69 (2002) 741-746
69. A.Kukhta, E.Kolesnik, M.Taoubi, V.Galkin, A model of organic thin film electroluminescence. *J.Optoel.Adv.Mat.* 4 (2002) 575-580
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72. A.V. Kukhta, E.E. Kolesnik, New materials and nanostructures for organic electroluminescent devices. In "Physics, chemistry and application of nanostructures", Eds. V.E. Borisenko, S.V. Gaponenko, V.S. Gurin, World Scientific, 2001, pp. 403-407.
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