

NIMI	Tšeslav Luštšik
TEADUSALA	Tahke keha füüsika
UURIMISTÖÖ PEASUUNAD	Laija keelutsooniga materjalide optika ja spektroskoopia, dielektrikute kiiritusfüüsika
VALIMISAEG	30. oktoober 1964
AKADEEMIA OSAKOND	Astronoomia ja füüsika osakond
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SÜNNIAEG ja -KOHT	15. veebruar 1928 Peterburi
PEREKONNASEIS	Abielus, poeg
TÖÖKOHT	Tartu Ülikooli Füüsika Instituudi vanemteadur (alates 1994)
HARIDUS	1946 Leningradi 289. Keskkool 1951 Leningradi Riiklik Ülikool
TEADUSKRAAD	1954 füüsika-matemaatikakandidaat, Leningradi Ülikooli juures, teema: <i>Investigation of trapping centres in alkali halide crystal-phosphors</i> 1964 füüsika-matemaatikadoktor, Leningradi Riikliku Optika Instituudi juures, teema: <i>Physical processes in alkali halide crystal-phosphors</i> 1968 professori kutse
TEENISTUSKÄIK	1951–1954 aspirantuur Leningradi Ülikooli juures 1954–1959 Füüsika ja Astronoomia Instituudi vanemteadur 1960–1986 samas (alates 1973 Füüsika Instituudi) sektorijuhataja 1974–1988 samas osakonnajuhataja 1986–1993 samas laboratooriumijuhataja 1994–... vanemteadur
TUNNUSTUSED	1959 Eesti Riiklik teaduspreemia teadlasrühma koosseisus 1968 professori kutse 1968 medal töövapruse eest 1988 ENSV teeneline teadlane 1988 Rahvaste Sõpruse Orden 1988 Eesti Teaduste Akadeemia medal 2004 Eesti Vabariigi teaduspreemia elutöö eest 2006 Valgetähe III klassi teenetemärk
TEADUS- ORGANISATSIOONILINE ja -ADMINISTRATIIVNE TEGEVUS	Viimastel aastatel pole
JUHENDAMISEL	DOKTORITÖÖD (nimi, aasta, töö pealkiri, kus kaitstud):

Alates 1958. aastast on juhendamisel (ja kaasjuhendamisel) valminud ja kaitstud 47 füüsika-matemaatika- ja 3 keemiakandidaadi väitekirja, nende hulgas:

Zaitov, F. 1958. Investigation of trapping centres and relaxation processes in alkali halide crystal-phosphors. Tartu University. (in Russ.).

Švarts, K. 1960. Processes of luminescence quenching in alkali halide crystal-phosphors. Tartu University. (in Russ.).

Jaek, I. 1962. Recombination luminescence of alkali halide crystals doped with mercury-like ions. Tartu University. (in Russ.).

Liidja, G. 1961. Exciton interaction with microdefects in alkali halide crystal-phosphors. Tartu University. (in Russ.).

Elango, M. 1964. Electronic and ionic processes at the radiation creation and thermal annealing of colour centres in NaCl single crystals. Tartu University. (in Russ.).

Käämbre, H. 1964. Photoelectric phenomena and recombination luminescence of ionic crystals. Tartu University (in Russ.).

Ilmas, E. 1966. Photon multiplication in crystal-phosphors. Tartu University (in Russ.).

Trofimova-Eksina, T. 1966. Physical processes in ionic crystals under interaction with 50-5000 eV electrons. Tartu University. (in Russ.).

Belkind, A. 1966. Electron emission and colour centres in alkali halide crystals under interaction with ionising radiation. Tartu University (in Russ.).

Pung, L. 1967. Kaasjuhendaja Eljaševitš, M. A. Investigation of self-trapped holes and hole processes in ionic crystals by means of non-isothermal relaxation of EPR. Tartu University (in Russ.).

Haldre, Ü. 1967. Investigation of electron and hole processes in luminescent ionic crystals by optical and EPR methods. Tartu University (in Russ.).

Denks, V. 1969. Usage of electric fields for the investigation of quasi-particles in luminescent ionic crystals. Tartu University (in Russ.).

Vitols, I. 1969. Investigation of electron-hole processes in alkali halide crystals. Latvian University, Riga. (in Russ.).

Kuketaev, T. 1970. (kaasjuh. N. Luštšik). Spectroscopy of Cu^+ and Ag^+ centres in alkali halide crystals. Tartu University. (in Russ.).

Jõgi, H. 1972. (kaasjuh. A. Malysheva). Electron-microscope and optical investigation of radiation defects in KBr crystals and sublimated layers. Tartu University. (in Russ.).

Savikhin, F. 1972. (kaasjuh. I. Jaek). Linear and superlinear processes at the thermally stimulated luminescence of crystal-phosphors under photo-, γ - and α -irradiation. Tartu University. (in Russ.).

Tšolahh, S. 1974. Electronic excitations and luminescence of lithium hydride. Ural Polytechnic Institute, Sverdlovsk. (in Russ.).

Kuusmann, I. 1975. Spectral-kinetic investigation of cathodoluminescence of ionic crystals. Tartu University. (in Russ.).

Kärner, T. 1975. (kaasjuh. A. Malysheva). Recombination luminescence and

- paramagnetic centers in irradiated MgO crystals. Tartu, Institute of Physics. (in Russ.).
- Ploom, L. 1978. (kaasjuh. R. Gindina). Method of growth and radiation defects in KCl crystals with the content of impurities of 10^{-6} - 10^{-8} . Tartu University. (in Russ.).
- Savikhina, T. 1979. Photon multiplication in luminophors based on metal oxides. Tartu, Institute of Physics. (in Russ.).
- Feldbach, E. 1983. (kaasjuh. I. Kuusmann). VUV luminescence of free and bounded excitons in magnesium oxide. Tartu, Institute of Physics. (in Russ.).
- Tajirov, M. 1983. (kaasjuh. J. Vassiltšenko). Low-temperature creation of Frenkel defect pairs by VUV radiation in KCl, KBr and CsBr. Tartu, Institute of Physics. (in Russ.).
- Makhov, V. 1984. (kaasjuh. Ju. M. Aleksandrov). Luminescence excitation and defect creation under synchrotron radiation (5-30 eV) in ionic crystals. Moscow, Lebedev Institute of Physics. (in Russ.).
- Mürk, V. 1984. Luminescence of ionic crystals under excitation by pulses of a powerful electron beam. Tartu, Institute of Physics (in Russ.).
- Kolk, J. 1984. Low-temperature creation and transformation of paramagnetic radiation defects in KCl and RbCl crystals. Tartu University.
- Baimakhanov, A. 1987. (kaasjuh. H. Jõgi). Electron-microscopic and optical investigation of defect creation under irradiation of KCl, KBr and RbBr by X-rays or XeCl-laser emission. Tartu, Institute of Physics. (in Russ.).
- Nikiforova, O. 1989. (kaasjuh. A. Maaros). Growth of KCl, RbCl, KBr crystals of high purity and perfection and investigation of bivacancies in these systems. Tartu University. (in Russ.).

PUBLIKATSIOONID

TEADUSARTIKLID (üldarv ja eraldi kuni viis viimase kümne aasta olulisimat):

üle 350

- Lushchik, A., Kudryavtseva, I., Lushchik, Ch., Vasil'chenko, E., Kirm, M., Martinson, I. Creation of stable Frenkel defects by VUV radiation in KBr crystals under conditions of multiplication of electronic excitations. *Phys. Rev. B*, 1995, 52, 10069–10072.
- Lushchik, A., Feldbach, E., Kink, R., Lushchik, Ch., Kirm, M., Martinson, I. Secondary excitons in alkali halide crystals. *Phys. Rev. B*, 1996, 53, 5379–5387.
- Kirm, M., Zimmerer, G., Feldbach, E., Lushchik, A., Lushchik, Ch., Savikhin, F. Self-trapping and multiplication of electronic excitations in Al_2O_3 and $\text{Al}_2\text{O}_3\text{:Sc}$ crystals. *Phys. Rev. B*, 1999, 60, 502–510.
- Lushchik, Ch., Demidenko, V., Kirm, M., Kudryavtseva, I., Lushchik, A., Martinson, I., Nagirnyi, V., Vasil'chenko, E. Creation of F centres and multiplication of electronic excitations in $\text{Na}_6\text{Al}_6\text{Si}_6\text{O}_{24}(\text{NaBr})_{2x}$ optical ceramics under VUV irradiation. *J. Phys: Condens. Matter*, 2001, 13, 6133–6149.
- Kirm, M., Lushchik, A., Lushchik, Ch. Creation of groups of spatially correlated excitations in wide-gap solids. *Phys. stat. sol. (a)*, 2005, 202, 213–220.

MONOGRAAFIAD (kõik pealkirjad ja ilmumisandmed: koht, aasta, kirjastus):

- Lushchik, Ch. B. Investigation of Trapping Centres in Alkali Halide Crystal-

Phosphors. Tartu, 1955, 227 p. (Trudy Inst. Fiz. Astron. AN ESSR; 3). (in Russ.).

Lushchik, Ch.B. Free and self-trapped excitons in alkali halides: Spectra and dynamics. Chapter 12. Rashba, E. I., Sturge, M. D. (eds) Excitons, Amsterdam, North-Holland, 1982, 506–541.

Lushchik, Ch. B., Gavrilov, F. F., Zavt, G. S., Plekhanov, V. G., Cholakh, S. O. Electronic Excitations and Defects in Lithium Hydride. Nauka, Moscow, 1985, 214 p. (in Russ.).

Lushchik, Ch. B. Creation of Frenkel defect pairs by excitons in alkali halides. Chapter 8 Johnson, R. A., Orlov, R. A. (eds) Physics of Radiation Effects in Crystals, Elsevier Sci. Publ., 1986, 473–525. (Modern Problems in Condensed Matter; 13).

Lushchik, Ch., Lushchik, A. Decay of Electronic Excitations with Defect Formation in Solids. Nauka, Moscow, 1989, 263 p. (in Russ.).