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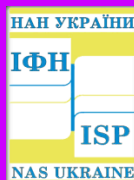
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RUBRICATION

SEMICONDUCTOR PHYSICS	3
PHYSICS OF SEMICONDUCTOR DEVICES	5
HETERO- AND LOW-DIMENSIONAL STRUCTURES	6
OPTICS	6
OPTOELECTRONICS AND OPTOELECTRONIC DEVICES	7
SENSORS	9
LECTURES, PRESENTATIONS	9

[Link of MASTER ARTICLE CONTENT 2018-2019](#)

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SEMICONDUCTOR PHYSICS

- Bacherikov, Yu.Yu., Konakova, R.V., Okhrimenko, O.B. (2020). **Comparative characteristics of $\text{TiO}_2(\text{Er}_2\text{O}_3, \text{Dy}_2\text{O}_3)/\text{por-SiC/SiC}$ heterostructures (Review).** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 253-259. <https://doi.org/10.15407/spqeo23.03.253> . [Full text is Open Access.](#)
- Bakhadyrkhanov, M.K., Ismaylov, B.K., Tachilin, S.A., Ismailov, K.A., Zikrillaev, N.F. (2020). **Influence of electrically neutral nickel atoms on electrical and recombination parameters of silicon.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 361-365. <https://doi.org/10.15407/spqeo23.04.361> . [Full text is Open Access.](#)
- Bendak, A.V., Skubenych, K.V., Pogodin, A.I., Bilanych, V.S., Kranjčec, M., Studenyak, I.P. (2020). **Influence of cation substitution on mechanical properties of $(\text{Cu}_{1-x}\text{Ag}_x)_7\text{GeSe}_5\text{I}$ mixed crystals and composites on their base.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23 (1), 37–40. <https://doi.org/10.15407/spqeo23.01.037> . [Full text is Open Access.](#)
- Ilchuk, H.A., Korbutyak, D.V., Kashuba, A.I., Andriyevsky, B., Kupchak, I.M., Petrus, R.Yu., Semkiv, I.V. (2020). **Elastic properties of $\text{CdTe}_{1-x}\text{Se}_x$ ($x = 1/16$) solid solution: First principles study.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 355-360. <https://doi.org/10.15407/spqeo23.04.355> . [Full text is Open Access.](#)
- Kashirina, N.I., Kashyryna, Ya.O., Korol, O.A., Roik, O.S. (2020). **Energy of interaction between polarons and spatial configuration of bipolaron in two-dimensional systems.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 282-289. <https://doi.org/10.15407/spqeo23.03.282> . [Full text is Open Access.](#)
- Kazantseva, Z.I., Koshets, I.A., Zaharenko, O.M., Kharchenko, S.G., Kalchenko, V.I. (2020). **Sensory features of thiacalix[4]arene molecules towards volatile halogen-aromatic compounds.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 41–45. <https://doi.org/10.15407/spqeo23.01.041> . [Full text is Open Access.](#)
- Khomchenko, V.S., Sopinsky, M.V., Dan'ko, V.A., Olkhovik, G.P. (2020). **Doping the thin films by using the original Close Space Sublimation method.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 5–28. <https://doi.org/10.15407/spqeo23.01.005> . [Full text is Open Access.](#)
- Kovalchuk, O.V., Kotovskyi, V.Yo., Ovcharek, V.E., Oleinikova, I.V., Kovalchuk, T.M. (2020). **Features of dielectric properties of medical thermal indicators based on dispersions of cholesteric liquid crystals in the polymer matrix.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 372-378. <https://doi.org/10.15407/spqeo23.04.372> . [Full text is Open Access.](#)
- Latreche, A. (2020). **Determination of temperature dependence of electron effective mass in 4H-SiC from reverse current-voltage characteristics of 4H-SiC Schottky barrier diodes.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 271-275. <https://doi.org/10.15407/spqeo23.03.271> . [Full text is Open Access.](#)

Lazur, V.Yu., Aleksiy, V.V., Myhalyna, S.I., Hnatič, M. (2020). **Four-particle formalism of the CDW method in two-electron charge-exchange reactions.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 119-128. <https://doi.org/10.15407/spqeo23.02.119> . [Full text is Open Access.](#)

Leyderman, A.Yu., Uteniyazov, A.K., Nsanbaev, M.T. (2020). **Recombination statistics of non-equilibrium carriers in the model of semiconductor with donor-acceptor pairs possessing variable recombination activity.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 290-293. <https://doi.org/10.15407/spqeo23.03.290> . [Full text is Open Access.](#)

Marki, R., Zaabat, M. (2020). **Effect of different parameters on the carrier mobility in NWTFT.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 141-145. <https://doi.org/10.15407/spqeo23.02.141> . [Full text is Open Access.](#)

Milenin, G.V., Redko, R.A. (2020). **Transformation of defects in semiconductor structures under the influence of microwave electromagnetic radiation, which is stimulated by drift phenomena.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 46–51. <https://doi.org/10.15407/spqeo23.01.046> . [Full text is Open Access.](#)

Nawarut Jarucha, Nuanthip Wantana, Thanapong Sareein, Jakrapong Kaewkhao. (2020). Studying the properties of $Gd_2O_3-WO_3-CaO-SiO_2-B_2O_3$ glasses doped with Tb^3+ . *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 276-281. <https://doi.org/10.15407/spqeo23.03.276> . [Full text is Open Access.](#)

Nebola, I.I., Katanytsia, A.F., Shteyfan, A.Ya., Shkyrta, I.M., Studenyak, I.P., Timko, M., Kopčanský, P. (2020). **Model phonon spectra of Cu_7SiS_5I and Ag_7SiS_5I crystals.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 366-371. <https://doi.org/10.15407/spqeo23.04.371> . [Full text is Open Access.](#)

Onyshchenko, V.F., Karachevtseva, L.A. (2020). **Effective minority carrier lifetime in double-sided macroporous silicon.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 29–36. <https://doi.org/10.15407/spqeo23.01.029> . [Full text is Open Access.](#)

Pipa, V.I., Liptuga, A.I. (2020). **Rotation of a thin heated plate caused by its own coherent thermal radiation.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 136-140. <https://doi.org/10.15407/spqeo23.02.136> . [Full text is Open Access.](#)

Redko, R.A., Milenin, G.V., Milenin, V.V., Redko, S.M. (2020). **Changes in impurity radiative recombination and surface morphology induced by treatment of GaP in weak magnetic field.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 302–307. <https://doi.org/10.15407/spqeo23.03.302> . [Full text is Open Access.](#)

S.I. Poberezhets, O.V. Kovalchuk, I.P. Studenyak, T.M. Kovalchuk, I.I. Poberezhets, V. Lacková, M. Timko, P. Kopčanský. **Temperature dependence of dielectric properties of the liquid crystal 6CB with the embedded Ag_7GeS_5I nanoparticles.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 129-135. <https://doi.org/10.15407/spqeo23.02.129> . [Full text is Open Access.](#)

Studenyak, I.P., Pogodin, A.I., Shender, I.A., Bereznyuk, S.M., Filep, M.J., Kokhan, O.P., Kopčanský, P. (2020). **Structural and impedance studies of copper-enriched**

(Cu_{0.75}Ag_{0.25})₇SiS₅I-based ceramics. *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 260-266. <https://doi.org/10.15407/spqeo23.03.260> . [Full text is Open Access.](#)

Tsybulenko, V.V., Shutov, S.V., Yerochin, S.Yu. (2020). **Determination of crystallization conditions of Ge/GaAs heterostructures in scanning LPE method.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 294-301. <https://doi.org/10.15407/spqeo23.03.294> . [Full text is Open Access.](#)

Uteniyazov, A.K., Leyderman, A.Yu., Ayukhanov, R.A., Esenbaeva, E.S., Gafurova, M.V. (2020). **Features of current transport in Al–Al₂O₃–p–CdTe–Mo structure.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 339-345. <https://doi.org/10.15407/spqeo23.04.339> . [Full text is Open Access.](#)

Vlaskina, S.I., Mishinova, G.N., Shaginyan, I.L., Smertenko, P.S., Svechnikov, G.S. (2020). **Characterization of nano-bio silicon carbide.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 346-354. <https://doi.org/10.15407/spqeo23.04.346> . [Full text is Open Access.](#)

Vora, A.M. (2020). **Study of structural, electrical and optical properties of MoRe_{0.001}Se_{1.999} single crystal.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 267-270. <https://doi.org/10.15407/spqeo23.03.267> . [Full text is Open Access.](#)

Vovk, V.E., Kovalchuk, O.V., Kopčanský, P., Kovalchuk, T.M. (2020). Dielectric properties of nematic liquid crystal with impurities of supramolecular Ni-TMTAA-TCNQ complexes. *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 146-154. <https://doi.org/10.15407/spqeo23.02.146> . [Full text is Open Access.](#)

PHYSICS OF SEMICONDUCTOR DEVICES

Deibuk, V.G., Yuriychuk, I.M., Lemberski, I. (2020). **Fidelity of noisy multiple-control reversible gates.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 385-392. <https://doi.org/10.15407/spqeo23.04.385> . [Full text is Open Access.](#)

Rudenko, T.E., Nazarov, A.N., Lysenko, V.S. (2020). **The advancement of silicon-on-insulator (SOI) devices and their basic properties.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 227-252. <https://doi.org/10.15407/spqeo23.03.227> . [Full text is Open Access.](#)

Verbitskiy, V.G., Voevodin, S.V., Fedulov, V.V., Kalisty, G.V., Verbitskiy, D.O. (2020). **Manifestation of the channeling effect when manufacturing JFET transistors.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 379-384. <https://doi.org/10.15407/spqeo23.04.379> . [Full text is Open Access.](#)

HETERO- AND LOW-DIMENSIONAL STRUCTURES

Biliuk, A.A., Semchuk, O.Yu., Havryliuk, O.O. (2020). **Width of the surface plasmon resonance line in spherical metal nanoparticles.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 308-315. <https://doi.org/10.15407/spqeo23.03.308> . [Full text is Open Access.](#)

Fitio, V.M., Bendziak, A.V., Yaremchuk, I.Ya., Bobitski, Ya.V. (2020). **Features of planar metal/dielectric nanowaveguides.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 168-174. <https://doi.org/10.15407/spqeo23.02.168> . [Full text is Open Access.](#)

Kapush, O.A., Boruk, S.D., Boruk, O.S., Budzulyak, S.I., Kulchytsky, B.N., Kosinov, O.G., Trishchuk, L.I., Mazarchuk, I.O., Morozovska, V.J., Dzhagan, V.M., Hatilov, S.E., Korbutiak, D.V. (2020). **Effect of the nature of dispersion medium on the CdTe/TGA nanocrystal formation in colloidal solutions and polymeric membranes.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 160-167. <https://doi.org/10.15407/spqeo23.02.160> . [Full text is Open Access.](#)

Kulish, M.R., Kostylyov, V.P., Sachenko, A.V., Sokolovskyi, I.O., Shkrebtii, A.I. (2020). **Influence of the quantum dots bandgap and their dispersion on the loss of luminescent quanta.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 155-159. <https://doi.org/10.15407/spqeo23.02.155> . [Full text is Open Access.](#)

Kupchak, I.M., Korbutyak, D.V., Serpak, N.F., Shkrebtii, A. (2020). **Metal vacancies in $Cd_{1-x}Zn_xS$ quantum dots.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 66–70. <https://doi.org/10.15407/spqeo23.01.066> . [Full text is Open Access.](#)

Sandeep, K. (2020). **Ionic conduction properties of nanocrystalline $Er_2Ti_2O_7$ functional material.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 52–59. <https://doi.org/10.15407/spqeo23.01.052> . [Full text is Open Access.](#)

Vorona, I.P., Ishchenko, S.S., Okulov, S.M., Nosenko, V.V. (2020). **Some features of Mn^{2+} EPR spectra in cubic nano-ZnS.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 60–65. <https://doi.org/10.15407/spqeo23.01.060> . [Full text is Open Access.](#)

OPTICS

Bacherikov, Yu.Yu., Goroneskul, V.Yu., Gudymenko, O.Yo., Kladko, V.P., Kolomys, O.F., Krishchenko, I.M., Okhrimenko, O.B., Strelchuk, V.V. (2020). **Influence of microwave radiation on relaxation processes in silicon carbide.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 175-179. <https://doi.org/10.15407/spqeo23.02.175> . [Full text is Open Access.](#)

Davidenko, N.A., Davidenko, I.I., Kravchenko, V.V., Pavlov, V.A., Tarasenko, V.V., Chuprina, N.G. (2020). **Polarization holography in azobenzene polymeric films prepared using the new chemical method.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 323-328. <https://doi.org/10.15407/spqeo23.03.323> . [Full text is Open Access.](#)

Granchak, V.M., Sisyuk, V.G., Dorozinska, H.V., Maslov, V.P., Dorozinsky, G.V., Kudryavtsev, O.O., Kachur, N.V. (2020). **Studying the polymerization efficiency of photosensitive compositions by using the surface plasmon resonance method.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 393-399. <https://doi.org/10.15407/spqeo23.04.393> . [Full text is Open Access.](#)

Karachevtseva, L.A., Lytvynenko, O.O. (2020). **High-coherent oscillations in IR spectra of macroporous silicon with nanocoatings.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 316-322. <https://doi.org/10.15407/spqeo23.03.316> . [Full text is Open Access.](#)

Lysiuk, V.O., Rozouvan, S.G., Staschuk, V.S., Stukalenko, V.V. (2020). **Magneto-optical properties of nanocomposites $(\text{Co}_{41}\text{Fe}_{39}\text{B}_{20})_x(\text{SiO}_2)_{100-x}$.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 180-185. <https://doi.org/10.15407/spqeo23.02.180> . [Full text is Open Access.](#)

Morozhenko, V.O., Maslov, V.P., Bariakhtar, I.V., Kachur, N.V. (2020). **Determination of the parameters of coherent magneto-optical layers on a finite absorbing substrate from thermal radiation spectra.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 400-407. <https://doi.org/10.15407/spqeo23.04.400> . [Full text is Open Access.](#)

Qasim, N.H., Pyliavskiy, V.V. (2020). **Color temperature line: forward and inverse transformation.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 75–80. <https://doi.org/10.15407/spqeo23.01.075> . [Full text is Open Access.](#)

Rudko, G.Yu., Sartinska, L.L., Isaieva, O.F., Gule, E.G., Eren, T., Altay, E. (2020). **Light-emitting properties of BN synthesized by different techniques.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 193-200. <https://doi.org/10.15407/spqeo23.02.193> . [Full text is Open Access.](#)

Samoylov, V.B., Levash, L.V., Rosnovskiy, O.A., Vedula, M.Yu., Rad'ko, V.S. (2020). **Pyroelectric USB-joulemeters of pulsed laser radiation.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 71–74. <https://doi.org/10.15407/spqeo23.01.071> . [Full text is Open Access.](#)

Studeniyak, I.P., Bereznyuk, S.M., Pop, M.M., Studeniyak, V.I., Pogodin, A.I., Kokhan, O.P., Grančič, B., Kúš, P. (2020). **Influence of cation substitution on optical constants of $(\text{Cu}_{1-x}\text{Ag}_x)_7\text{SiS}_5\text{I}$ mixed crystals.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 186-192. <https://doi.org/10.15407/spqeo23.02.186> . [Full text is Open Access.](#)

OPTOELECTRONICS AND OPTOELECTRONIC DEVICES

Bushma, A.V., Turukalo, A.V. (2020). **Software controlling the LED bar graph displays.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(3), 329-335. <https://doi.org/10.15407/spqeo23.03.329> . [Full text is Open Access.](#)

Davidenko, N.A., Davidenko, I.I., Sokolov, M.Yu., Gonchar, A.N., Mokrinskaya, E.V., Studzinsky, S.L., Pavlov, V.A., Tarasenko, V.V., Tonkopieva, L.S., Chuprina, N.G. (2020). **New material based on polyurethane doped with azobenzene dyes in recording media for dynamic polarization holography.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 81–84. <https://doi.org/10.15407/spqeo23.01.081> . [Full text is Open Access.](#)

Gridina, N.Ya., Maslov, V.P., Ushenin, Yu.V., Rozumenko, V.D., Morozov, A.N. (2020). **Application of surface plasmon resonance phenomenon for early detection and determination of the drug concentration for treating the relapses of malignant tumors.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 85–90. <https://doi.org/10.15407/spqeo23.01.085> . [Full text is Open Access.](#)

Hussain, S., Rahman, Md.M., Proshan, Md.T. (2020). **Modeling of $\text{In}_{0.17}\text{Ga}_{0.83}\text{N}/\text{In}_x\text{Ga}_{1-x}\text{N}/\text{Al}_y\text{Ga}_{1-y}\text{N}$ light emitting diode structure on ScAlMgO_4 (0001) substrate for high intensity red emission.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 408- 414. <https://doi.org/10.15407/spqeo23.04.408> . [Full text is Open Access.](#)

Kremenetskaya, Y.A., Markov, S.E., Melnyk, Yu.V. (2020). **Structural optimization of optoelectronic components in millimeter-wave radio-transmitting modules.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 424-430. <https://doi.org/10.15407/spqeo23.04.424> . [Full text is Open Access.](#)

Pekur, D.V., Nikolaenko, Yu.E., Sorokin, V.M. (2020). **Optimization of the cooling system design for a compact high-power LED luminaire.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 91–101. <https://doi.org/10.15407/spqeo23.01.091> . [Full text is Open Access.](#)

Pekur, D.V., Sorokin, V.M., Nikolaenko, Yu.E., Kostilyov, V.P., Solntsev, V.S., Ponomarenko, V.V. (2020). **Electro-optical characteristics of an innovative LED luminaire with an LED matrix cooling system based on heat pipes.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 415-423. <https://doi.org/10.15407/spqeo23.04.415> . [Full text is Open Access.](#)

Veleschuk, V.P., Vlasenko, O.I., Vlasenko, Z.K., Levytskyi, S.N., Gnatyuk, D.V., Shefer, A.V., Borshch, V.V. and Borshch, O.B. (2020). **Dependence of the melting threshold of CdTe on the wavelength and pulse duration of laser radiation.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 102–109. [The paper was retracted in accord with the Editorial Board decision.](#)

Vernydub, R.M., Kyrylenko, O.I., Konoreva, O.V., Olikh, Ya.M., Litovchenko, P.G., Pavlovskyy, Yu.V., Potera, P., Tartachnyk, V.P. (2020). **Electrophysical characteristics of $\text{GaAs}_{1-x}\text{P}_x$ LEDs irradiated by 2 MeV electrons.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 201-207. <https://doi.org/10.15407/spqeo23.02.201> . [Full text is Open Access.](#)

SENSORS

Andriev, O.V., Lupkin, V.B., Zhurybeda, M.N., Maslov, V.P., Larin, V.J., Morozhenko, V.O., Dorozinsky, G.V., Kachur, N.V., Dorozinska, H.V., Turovska, A.V. (2020). **Studying optical characteristics of aviation fuels samples stored under various conditions.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 214-219. <https://doi.org/10.15407/spqeo23.02.214> . [Full text is Open Access.](#)

Chegel, V.I., Lopatynskiy, A.M., Lytvyn, V.K., Demydov, P.V., Martínez-Pastor, J.P., Abargues, R., Gadea, E.A., Piletsky, S.A. (2020). **Localized surface plasmon resonance nanochips with molecularly imprinted polymer coating for explosives sensing.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 431-436. <https://doi.org/10.15407/spqeo23.04.431> . [Full text is Open Access.](#)

Smertenko, P.S. (2020). **Modeling of thermometric characteristics of thermodiode sensors by using the dimensionless sensitivity.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(4), 437-441. <https://doi.org/10.15407/spqeo23.04.437> . [Full text is Open Access.](#)

Sukach, A.V., Tetyorkin, V.V., Tkachuk, A.I. (2020). **Shunt current in InAs diffused photodiodes.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(2), 208-213. <https://doi.org/10.15407/spqeo23.02.208> . [Full text is Open Access.](#)

LECTURES, PRESENTATIONS

(For subscribers only)

Kapush, O.A. (2020). **Conversion semiconductor LED.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 110.

Smertenko, P.S. (2020). **Dimensionless sensitivity for analysis, diagnostics, modelling, monitoring and prognosis of processes.** *Semiconductor Physics, Quantum Electronics and Optoelectronics*, 23(1), 111.