M.V. Lomonosov Moscow State University

Department of Physics

7-th All-Russian Conference

NITRIDES OF GALLIUM, INDIUM AND ALUMINUM: STRUCTURES AND DEVICES

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PROGRAM

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01 February

Registration	**8:00-10:00**
Conference opening. Chair ***N.N.Sysoev.*** Dean of the Dept. of Physics Prof. **V.I.Trukhin**	10:00-10:10
Technical notes. Secretary **A.N.Turkin.**	10:10-10:15
Research and development of structures and devices based on nitride semiconductors in Russia and in the world during last years **A.E. Yunovich**	10:15-10:30

Session «Epitaxy-1». Chair *P.S.Kopjev*	
Modeling of III-nitride materials technology: from bulk growth to device characteristics **R.A. Talalaev**	10:30-11:00
Optimization of III-N heterostructures growth by MOVPE via surface processes control **W.V. Lundin,** E.E. Zavarin, M.A. Sinitsyn, A.E. Nikolaev, A.V.Sakharov, A.F. Tsatsulnikov, E.V. Yakovlev, R.A. Talalaev, A.V. Lobanova, A.S. Segal	11:00-11:30
Porous structure on GaN-sapphire interface improving LED light extraction efficiency **A.S. Pavluchenko,** D.A. Zakheim, D.A. Bauman	11:30-11:45
Effect of the growth conditions and reactor height on the AlGaN growth rate and composition **E.V. Yakovlev,** A.V. Lobanova, J. Stellmach, Ö. Savaş, J. Schlegel, M. Pristovsek, M. Kneissl	11:45-12:00

Coffee break	**12:00-12:15**

Session «Substrates». Chair *A.E.Nikolaev*	
3" 6H SiC wafers production for III-N epitaxy **Yu.N. Makarov**, D.P.Litvin, A.V. Vasiliev, A.S. Segal, S.S. Nagalyuk, H. Helava, M.I. Voronova, K.D. Scherbachov	12:15-12:30
Manufacture of aluminum nitride substrates **T.Yu. Chemekova**, O.V. Avdeev, S.S. Nagalyuk, E.N. Mokhov, Yu.N. Makarov	12:30-12:45
Sublimation growth of AlN crystals on SiC substrates **E.N.Mokhov**	12:45-13:00
Millimeter thickness range GaN layers grown by HVPE **A.S. Zubrilov,** Y.S. Lelikov, R.I. Gorbunov, N.I. Bochkareva, V.V. Voronenkov, Ph.E.Latyshev, Y.T. Rebane, A.I. Tsuk, Y.G. Shreter	13:00-13:15
On the way to qualitative GaN substrates. V.E. Bugrov, M.A. Odnobludov, **A.E. Romanov**	13:15-13:30

Poster session 1	**13:30–14:15**
Lunch	**14:15–15:30**

Session «Properties- 1». Chair *A.V.Sakharov*	
Alloy components and impurities incorporation efficiency and defect formation during growth of III-N materials in the direction different from [0001] **A.Y.Polyakov,** A.V. Govorkov, N.B. Smirnov, H.Amano, S.J. Pearton, I-H. Lee, J. Hun, E.B. Yakimov, K.S. Zhuravlev, S.Yu. Karpov	15:30-16:00
Polarization of pl emission of nonpolar GaN layers and InGaN/GaN MQW structures grown on $LiAlO_2$ substrates **E. V. Lutsenko**, M. V. Rzheutski, V. N. Pavlovskii, G. P. Yablonskii, C. Mauder, H. Kalisch, M. Heuken, R. H. Jansen	16:00-16:15
Many-body effects in photoluminescence of GaN/AlN low-dimensional structures I.A. Aleksandrov, **K.S. Zhuravlev**	16:15-16:30
Diversity in nanomaterial organization – source of problems in III-N device physics understanding A.A.Greshnov, A.L. Zakgeim, A.E. Chernyakov, E.I. Shabunina, **N.M.Shmidt**, E.B. Yakimov	16:30-16:45

Coffee break	**16:45-17:00**

Session «LED-1». Chair *V.M.Ustinov*	
Bridge over the "green valley". Towards RGB white light source **A.F.Tsatsulnikov,** W.V.Lundin, A.V.Sakharov, E.E.Zavarin, S.O.Usov, A.E. Nikolaev, N.V.Kryzhanovskaya, M.A. Synitsin, V.S. Sizov, N.A. Cherkashin, A.E.Chernyakov, A.L.Zakgeim, M.N. Mizerov	17:00-17:30
Blue light emitting diode with the periodically structured p-contact **Yu. Kholopova**, M. Barabanenkov, S. Shapoval	17:30-17:45
Modeling of high-power light-emitting diodes: comparative analysis of advanced chip designs **S.Yu. Karpov,** K.A. Bulashevich, O.V. Khokhlev, M.V. Bogdanov, M.S. Ramm, I.Yu. Evstratov	17:45-18:00
Optimization of active region for GaN based LEDs **V.S.Sizov,** A. F. Tsatsulnikov, A.V.Sakharov , W.V.Lundin , E.E.Zavarin , A.E. Nikolaev	18:00-18:15

Welcome party	**18:30-20:50**

02 February

Session «Properties- 2». Chair *S.Yu.Shapoval*	
Studies of the effects of electron injection in III-nitride semiconductors **L. Chernyak**	9:30-10:00
Lattice dynamics of GaN/AlN and GaN/AlGaN superlattices: theory and experiment **V.Yu. Davydov,** M.B.Smirnov, Yu.E. Kitaev, A.N. Smirnov, M.A. Yagovkina, V.W.Lundin, E.E.Zavarin	10:00-10:30
Admitttance spectroscopy – a powerful method for diagnostics of electronic structure of heterostructures with multiple quantum wells InGaN/GaN **O.V. Kucherova**, V.I. Zubkov	10:30-10:45
X-ray diffraction study of deformation state of multilayered structures InGaN/GaN **B.S. Yavich**, V.P Kladko, A.V. Kuchuk, N.V. Safryuk, R.V. Konakova, V.F. Machulin, A.E. Belyaev	10:45-11:00

Coffee break	**11:00-11:15**

Session «Epitaxy-2». Chair *W.V.Lundin*	
Large scale mocvd reactors for solid state lighting **F. Schulte** , L. Pauli, B. Schineller, and M. Heuken	11:15-11:45
Advancements in mocvd technology required to reduce LED manufacturing cost **A. Gurary**, M. Lamarra	11:45-12:15
Measurement of real wafer temperature during GaN growth on sapphire and SiC **M. Borasio**, K. Haberland, T. Schenk, F. Brunner, M. Weyers, J.-T. Zettler	12:15-12:30
Optimization of light and electrophysical characteristics of GaN-based LED structures **A.A.Naidin**, A.F.Ivanov, E.V.Ershov, S.A.Krukov, O.A.Rogachkov, O.I.Rogachkov	12:30-12:45

Poster session 2	**12:45–13:45**

Lunch	**13:45–15:00**

Session «SSL-1» *Chair G.V.Itkinson*	
Problems of degradation, reability and stability of parameters of LED`s as light sources **F.I. Manyakhin**	15:00-15:30
Problems of perception LED lighting human vision and develop of standards and norms for LED lighting **E.V. Dolin,** L.M. Teksheva, Y.G. Tkachuk	15:30-16:00
Laboratory «LIST» is the independent certified test center, first in Russia in the field of studying degradation procesess and metrology of semiconductors radiation **S.G.Nikiforov,** A.L. Arkhipov	16:00-16:15
High-power RGB LED light source with color smart control for medical-biological apparatus **A.V.Aladov,** S.B.Biryuchinskiy, SW.V.Demin, A.L.Zakgeim, G.Y.Klishin, M.N.Mizerov, K.V.Stelingovskiy, A.E.Chernyakov, A.F.Chumachenko	16:15-16:30

Coffee break	**16:30–16:45**

Session «SSL-2» Chair *G.V.Terekhov*	
Modern effective phosphors for solid state lighting **N.P. Soshchin**	16:45-17:15
Power white LEDs and green light-emitting diode based on phosphor, excited by violet radiation from InGaAlN p-n-heterostructures N.P.Soshcin, **L.M.Kogan,** N.A.Galchina, J.A.Portnyagin	17:15-17:30
Phosphors for white LEDs **R.B. Jabbarov,** N.N. Musayeva, S.H. Abdullaeva, F. Scholz, T. Wunderer, P. Benalloul, C. Barthou	17:30-17:45

Round table (and tea party): Problems of LEDs industry in Russia. Chairs: A.E.Yunovich, N.N.Bakin	**18:00 -20:15**

03 February

Session «Epitaxy-3». Chair: *V.G.Sidorov*	
AlGaN-based heterostructures for deep ultraviolet optoelectronics grown by plasma-assisted molecular beam epitaxy **V.N. Jmerik,** A.M. Mizerov, T.V. Shubina, A.A. Sitnikova, M.A. Yagovkina, P.S. Kop'ev, E.V. Lutsenko, N.P. Tarasyuk, A.V. Danilchyk, N.V. Rzheutskii, G.P. Yablonskii, S.V. Ivanov	9:30-10:00
Growth of high quality AlN layers by ammonia molecular-beam epitaxy **T.V. Malin,** A.V. Tihonov, A.P. Vasilenko, K.S. Zhuravlev	10:00-10:15
Growth of $Al_xGa_{1-x}N$ layers ($0<x<1$) with different polarities by plasma-assisted molecular beam epitaxy **A.M. Mizerov,** V.N. Jmerik, P.S. Kop'ev and S.V. Ivanov	10:15-10:30
The influence of sapphire substrate orientation on crystalline quality of GaN films grown by hydride vapor phase epitaxy A.A. Donskov, L.I. Dyakonov, A.V. Govorkov, Yu.P. Kozlova, S.S. Malakhov, A.V. Markov, **M.V. Mezhennyi,** V.F. Pavlov, A.Y. Polyakov, V.I. Ratushnyi, N.B. Smirnov, T.G. Yugova	10:30-10:45
Ways to suppress parasitic deposition in vertical HVPE reactors for groth gallium nitride substrates **Y.T. Rebane,** N.I. Bochkareva, V.V. Voronenkov, R.I. Gorgunov, Ph.E.Latyshev, Y.S. Lelikov, A.S. Zubrilov, A.I. Tsuk, Y.G. Shreter	10:45-11:00
HVPE technology and reactor to produce GaN substrate materials **A. Usikov**, N. Singh, V. Soukhoveev, O. Kovalenkov, A. Syrkin, V. Ivantsov, T. Cornish, B. Scanlan, and L. Leung	11:00-11:15

Coffee break	**11:15–11:30**

Session «LED-2». Chair: *V.P.Chaly*	
High-power blue InGaN LEDs – ways to increase efficiency **D.A.Zakheim,** A.S.Pavluchenko, D.A.Bauman	11:30-11:45
Tunneling mechanism of efficiency droop in GaN light-emitting diodes **N.I. Bochkareva,** V.V. Voronenkov, R.I. Gorbunov, , A.S. Zubrilov, Y.S. Lelikov, F.E. Latyshev, Y.T.Rebane, A.I. Tsuk, Y.G. Shreter	11:45-12:00
Auger recombination contribution to the efficiency droop of blue InGaN MQW based LEDs B.Ya. Ber, **A.A. Greshnov,** A.L. Zakgeim, G.G. Zegrya, D.Yu. Kazanzev, Z.N. Sokolova, A.S. Pavluchenko, A.E. Chernyakov, N.M. Shmidt, E.B. Yakimov	12:00-12:15

Coffee break	**12:15-12:30**

Session «Electronic devices-1». Chair *Yu.N.Makarov*	
Overview of the nitride transistor technology development in JSC «SVETLANA-ROST» A.E.Byrnaz, A.L. Dudin, A.V. Naidenov, S.V. Kokin, D.M.Krasovitsky, M.V.Pavlenko, **S.I.Petrov,** I.S. Tkachenko, V.P.Chaly	12:30-13:00
InAlN/GaN and (AlN/GaN)/GaN heterostructures with 2-D electron gas **A.V.Sakharov,** W.V.lundin, A.E. Nikolaev, E.E.Zaverin, M.A.Sinitsin, M.A. Yagovkina, A.F.Tsatsulnikov	13:00-13:15
Quasi-monolithic ultra wideband microwave power amplifier on heterostructures AlGaN/GaN **B.V.Kalinin**, V.G.Guk, V.P.Chaly, A.N.Pikhtin	13:15-13:30
Microwave transistors at heterosystem AlGaN/GaN with specific output power 3 W/mm Yu. Matveev, D. Amelin, E. Enyushkina, A. Kuznetsov, E. Ovcharenko, A. Lisitskii, A. Pavlov, A.Trofimov, **N. Shchavruk**	13:30-13:45

Coffee break	**13:45-14:00**

Session «Electronic devices-2». Chair *A.N.Kovalev*	
Preliminary studies of GaN as a detector of α-particles and thermal neutrons **A.Y.Polyakov**, N.B. Smirnov, A.V. Govorkov, I.L. Gazizov, V.M. Zalyetin, E.A. Kozhukhova, A.V. Markov, N.G. Kolin, A.V. Korulin, D.I. Merkurisov, V.M. Boiko, S.J. Pearton , I-H. Lee	14:00-14:15
Ultraviolet MSM-photodetectors on AlGaN heterostructures S.V.Averin, **P.I.Kuznetzov**, V.A.Zhitov, N.V.Alkeev, A.A. Dorofeev, N.B.Gladisheva	14:15-14:30
Planar vacuum-semiconductor photodetector with semitransparance photocathode p-GaN(Cs,O)/AlN/C-Al_2O_3 V.V. Bakin, S.N. Kosolobov, H.E. Scheibler, **A.S. Terekhov**, V.N. Jmerik, A.M. Mizerov, S.V. Ivanov	14:30-14:45

Conference closing	**14:50 -15:10**

UV workshop

Т1 - III-N technology: bulk growth and substrates	П5 - Post-growth processing of III-N devices
Т2 - III-N technology: epitaxy	Э6 - Electronic, photosensitive and other III-N devices
О3 - Optical and electrical properties of III-Nitrides	СЛ7 - III-N LEDs and lasers
К4 - Quantum size heterostructures	СП8 - Solid State Lighting

Poster session 01 February

1.1Т2	Use of dimethylethylamine alane as Al precursor in nitride MOCVD A.E. Baranov, V.S. Sizov, E.E. Zavarin, V.W. Lundin, M.A. Sinitsyn, A.V. Sakharov, S.O. Usov, A.E. Nikolaev, A.F. Tsatsulnikov
1.2О3	The interference fringes in the electroreflectance spectra from InGaN/AlGaN/GaN heterostructures L.P. Avakyants, P.Yu. Bokov, A.V. Chervyakov
.3Т1	GaN films on Si substrates with Ge buffer layer Yu.N.Buzynin, O.I. Khrykin, V.G. Shengurov, M.N. Drozdov, Yu.N. Drozdov, S.A.Denisov
1.4Т2	Effect of growth parameters on stress in HVPE GaN films R.I. Gorbunov, N.I. Bochkareva, V.V. Voronenkov, Ph.E.Latyshev, Y.S. Lelikov, A.S. Zubrilov, A.I. Tsuk, Y.G. Shreter
1.5О3	Linear polarized photoluminescence from ensembles of GaN quantum dots imbedded in AlN matrix I.A. Aleksandrov, K.S. Zhuravlev, P.-O. Holtz
1.6К4	Growth and advanced characterization of InAlN/GaN distributed bragg reflectors E.E. Zavarin, W.V. Lundin, M.A. Sinitsyn, A.V. Sakharov, S.O. Usov, A.E. Nikolaev, S.I. Troshkov, M.A. Yagovkina, E.V. Yakovlev, R.A. Talalaev, D.V. Davydov, A.V. Lobanova, N.A. Cherkashin, M.J. Hytch, P.N. Brunkov, A.F. Tsatsulnikov
1.7О3	Investigation of optical and structural properties of InAlN/GaN distributed bragg reflectors S.O. Usov, E.E. Zavarin, A. F. Tsatsul'nikov, V.V. Lundin, A.V. Sakharov, A.E. Nikolaev, M. A. Sinitsyn, N.V. Kryzhanovskaya, S.I. Troshkov, N.N. Ledentsov
1.8СЛ7	Features of high-power InGaN LEDs operating in wide temperature-current range A.L.Zakgeim, D.A.Zakgeim, M.N.Mizerov, A.S.Pavlyuchenko, A.E.Chernyakov
1.9СЛ7	High-power light-emitting diodes with ultra-violet radiation L.M.Kogan, N.A.Galchina, A.A.Kolesnikov, J.A.Portnjagin, I.T.Rassohin
1.11Т1	GaN epitaxial films grown by HVPE on polycrystalline cvd diamond substrates using surface nanostructuring with TiN Or anodic Al oxide A.A. Donskov , L.I. Dyakonov, A.V. Govorkov, Yu.P. Kozlova, S.S. Malakhov, A.V. Markov, M.V. Mezhennyi, V.F. Pavlov, A.Y. Polyakov, N.B. Smirnov, T.G. Yugova, M.P. Duhnovsky, A.K. Ratnikova, Yu.Yu. Fyodorov, V.I. Ratushnyi, O.Yu. Kudryashov, I.A. Leontyev
1.12К4	Optical and structural properties of InGaN/GaN Short period superlattice for light emitting diodes active region N.V.Kryzhanovskaya, V.V.Lundin, A.E.Nikolaev, A.F.Tsatsul`nikov, A.V.Sakharov, N.A.Cherkachin, M. J. Hÿtch, G.A.Valkovskiy, M.A.Yagovkina, S.O.Usov

1.13Т1	Effect of surface contamination on HVPE epitaxial growth of galium nitride Ph.E.Latyshev, N.I. Bochkareva, V.V. Voronenkov, R.I. Gorbunov, Y.S. Lelikov, A.S. Zubrilov, A.M. Nemets, S.N. Petrov, Y.T. Rebane, A.I. Tsuk, Y.G. Shreter
1.14О3	Laser action and optical gain in InGaN/GaN MQWs grown on Si under optical pumping by femtosecond pulses E. V. Lutsenko, A. V. Danilchyk, V. Z. Zubialevich, V. N. Pavlovskii, G. P. Yablonskii, Y. Dikme, B. Schineller, M. Heuken, L. Rahimzadeh Khoshro, H. Kalisch, R. H .Jansen, M. B. Danailov, A. A. Demidovich
1.15Т1	Properties of thick GaN films grown by HVPE on GaN templates with TiN masks A.A. Donskov, L.I. Dyakonov, M.P. Duchnovskyi, A.V. Govorkov, Yu.P. Kozlova, S.S. Malakhov, A.V. Markov, M.V. Mezhennyi, V.F. Pavlov, A.Y. Polyakov, V.I. Ratushnyi, N.B. Smirnov, T.G. Yugova
1.16О3	Diffusion model of light extraction from LED chips Y.T.Rebane, R.I. Gorbunov, N.I. Bochkareva, A.S. Zubrilov, V.V. Voronenkov, Y.S. Lelikov, F.E. Latyshev, A.I. Tsyuk, Y.G. Shreter
1.17СЛ7	InGaN/AlGaN heterostructures for near-UV LEDs M.M. Rozhavskaya, V.S. Sizov, E.E. Zavarin, V.V. Lundin
1.18К4	Use of InAlN layers for optical confinement A.V. Sakharov, E.E. Zavarin, M.A. Sinitsyn, W.V. Lundin, N.Yu.Gordeev, A.F. Tsatsulnikov
1.19Т2	Low-temperature kinetics of III-N MOVPE growth W.V. Lundin, E.E. Zavarin, M.A. Sinitsyn, A.V. Sakharov, A.E. Nikolaev, A.S. Segal, E.V. Yakovlev, O.V. Bord
1.20П5	Reflective contacts ITO/Ag for high-power flip-chip AlGaInN-based LEDs I.P.Smirnova, L.K.Markov, E.M.Arakcheeva, M.M.Kulagina, D.A.Zakheim, M.M.Kukushkin
1.21Э6	Frequency and temperature dependences of capacitance –voltage characteristics in InGaN/GaN multiple quantum well light-emitting structures O.A. Soltanovich, N.M. Shmidt, E.B. Yakimov
1.22СЛ7	Synthesis and optimization of oxyanion-based phosphors parameters for white LEDs N.P. Soshchin, V.N.Litshmanova, V.A.Bolshukhin, E.A.Kirillov
1.23СЛ7	The optimization of luminous flux of high-power white LED with silicate phosphor A.V. Feopentov, L.M. Vtyurina
1.24СЛ7	Electroluminescence ripples of blue and green LEDs at low forward bias voltages Y.V. Trofimov, V.I. Tsvirko
1.25О3	Comparative analysis of thermal and current spreading in high-power InGaN LEDs with flip-chip and vertical structure A.L.Zakgeim, M.N.Mizerov, A.E.Chernyakov
1.26СЛ7	Influence of changing parameters of active region and buffer superlattice on spectra and efficiency of blue InGaN/GaN light-emitting diodes A.V.Chuyas, B.S.Yavich
1.27О3	Low – frequency noise in light emitting structures based on InGaN/GaN MQW E.I. Shabunina, N.M. Shmidt, A.E. Chernyakov, P.V. Petrov, M.E. Levinshtein, N.S. Averkiev

1.28T2	Aluminum nitride on silicon: conception of intermediate SiC layer, technology of HVPE V. N. Bessolov, Yu.V.Zhilyaev, E.V.Konenkova, S.A.Kukushkin, A.V.Osipov, N.A.Feoktistov, S.Sharofidinov, M.P. Shcheglov
1.29T1	Surface morphology features of GaN Layers grown on different orientation substrates A.A. Donskov, L.I. Dyakonov, Yu.P. Kozlova, C.C. Malahov, A.V. Markov, M.V. Mezennyi, V.F. Pavlov, T.G. Yugova
1.30O3	Measurements of excess carrier diffusion length in GaN. E.B. Yakimov
1.31K4	Effect of irradiation in scanning electron microscope on the spectrum and intensity of cathodoluminescence of light emitting structures with multiple quantum wells InGaN/GaN. P.S. Vergeles, N.M. Shmidt, E.E. Yakimov, E.B.Yakimov

Poster session 02 February

2.1О3	Time – resolved high field photoconductivity of AlGaN/GaN heterostructures B. A. Danilchenko, N.A.Tripachko, L.I.Shpinar, O.O.Voitsekhivska, E.A. Drok
2.2СЛ7	Phosphors based on cubic boron nitride doped with rare earth ions O.R. Abdullaev , E.M. Shishonok, A.S. Yakunin, D.M.Zhigunov, P.V.Ivannikov, I.N. Odin, M.V. Chukichev , A.E. Yunovich
2.3К4	Synchrotron photoemission spectroscopy studies of n-AlGaN and ultrathin Ba/n-AlGaN interfaces G.V. Benemanskaya, M.N. Lapushkin, S.N. Timoshnev, V.N. Zhmerik
2.4П5	Post growth processing of GaN films in contact metallization areas A.V. Bespalov, O.L. Golikova
2.5Т2	Application of HF reactor to nitride activation for obtaining Al_2O_3 /AlN structures Safaraliev G.K.,Bilalov B.A., Gitikchiev M.A
2.6СЛ7	Quantitative luminescence analysis of the parameters of light emitting diodes and lighting systems on their basis D.S. Bobuchenko, V.I. Tsvirko, Yu.V. Trofimov, V.V. Krasovskii, I.A. Khorunzhii, D.S. Domanevskii, R.D. Kakanakov
2.7П5	The ohmic and barrier contacts to n-GaN with diffusion barriers made by interstitial phases A.E. Belyaev, N.S. Boltovets, V.N. Ivanov, R.V. Konakova, V.P. Kladko, Ya.Ya. Kudryk, V.V. Milenin, V.N. Sheremet, Yu.N. Sveshnikov
2.8К4	Detection of defects in InGaN/AlGaN/GaN-heterostructures using true color and narrow-band color cathodoluminescence SEM-modes P.V. Ivannikov, A.I. Gabelchenko
2.9СЛ7	Degradation of light-emitting diodes on the basis of heterostructures InGaN/GaN At an irradiation fast neutrons A.V.Gradoboev, A.A.Vilisov, P.V.Rubanov, I.A.Asanov
2.10СП8	Development of the technology of manufacturing of LED matrixes on the basis of heterostructures InGaN/GaN/AlGaN V.A. Burobin, A.M. Konovalov, A.A. Gysev, E.N. Enushkina, A.A. Efimov, A.L. Kuznetsov, Y.A. Matveev, A.Y. Pavlov, V.A. Romanko, A.A. Tkacheva
2.11СЛ7	About the opportunity of creation and use of LEDs circular and axial radiation with stabilizing resonators on the mode H_{011} E.M.Gutzeit, A.A. Kurushin, V.E.Maslov
2.12О3	Investigation of indium concentration profile in InGaN/GaN MQW of blue LED structures influence on optical properties A.A. Arendarenko, I.G. Ermoshin, U.N. Sveshnikov, I.N. Ciplenkov
2.13П5	Ionic-plasma processing of GaN-based diode structures A.V. Zhelannov, V.E. Oudaltsov
2.14О3	Spectra and I-V characteristics kinetics of blue LEDS S.S. Strelchenko, Y.P. Golovatiy, P.S. Zakharov, E.V. Prokolkin
2.15Т2	The features of the aluminum nitride film formation at the thermochemical nitridation of sapphire. Kh.Sh-o. Kaltaev, N.S. Sidel´nikova, S.V. Nizgankovskiy, A.Y. Danko, M.A. Rom, M.V. Dobrotvorskaya
2.16Т1	Porous InP as soft substrate for InN films J. A. Suchikova, V.V. Kidalov, G. A. Sukach

2.17К4	Submicron optical spectroscopy of spatial uniformities of InGaN/GaN structures. O.F. Kolomys V.V. Strelchuk, K.A. Avramenko, M.Ya. Valakh, E.V. Lutsenko, V.N. Pavlovskii, G.P. Yablonskii
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