



**5-th All-Russian Conference
"Nitrides of gallium, indium and aluminum: structures
and devices"**

**Ministry of Education and Science of Russian Federation,
Russian Academy of Science,
M.V.Lomonosov Moscow State University Department of Physics,
Institute of UHF Semiconductor Electronics,
Ioffe Physico -Technical Institute of the Russian Academy of Science**

**At Financial Support of
"Svetlana Optoelectronics"
"Scientific and Technology Equipment"
"AIXTRON"
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"LAY TEC –GESELLSCHAFT"
"TDI"**

CONFERENCE PROGRAMME

M.V.Lomonosov Moscow State University Department of Physics

**Moscow
January 31 - February 2
2007**

WENESDAY, JANUARY 31

Registration – 9.00 – 11.30

Moscow State University Department of Physics, room 1-31

Morning Session, 11.30 – 14.25
Department of Physics, Hohlov's Room

Opening 11.30. - 12.00

11.30 - 11.40 Welcome to Moscow State University – Chairman – prof. P.K. KASHKAROV

11.40-11.45 Information. Scientific secretary A.N. Turkin

11.45 - 12.00 RESEARCH AND DEVELOPMENT OF NITRIDE SEMICONDUCTORS IN RUSSIA AND IN THE WORLD

A.E. Yunovich

12.00 – 14.25 Epitaxy of III-N materials
Chairman – P.S. Kop'ev

12.00 – 12.15 III-N LEDs ON SiC SUBSTRATES. MOCVD GROWTH DEVELOPMENT

W.V.Lundin, A.E.Nikolaev, E.E.Zavarin, M.A.Sinitsyn, A.V.Sakharov, S.O.Usov, and A.F.Tsatsulnikov

12.15 – 12.30 EFFECT OF PARASITIC CHEMISTRY IN AlGa_N MOVPE

A.V. Lobanova, E.V. Yakovlev, R.A Talalaev

12.30 – 12.45 NON-POLAR a-(In)Ga_N HETEROSTRUCTURES

E.E.Zavarin, W.V.Lundin, M.A.Sinitsyn, A.E.Nikolaev, A.V.Sakharov, D.S.Sizov, M.M.Kulagina, and A.F.Tsatsulnikov

12.45 – 13.00 THE EPITAXIAL LAYERS OF Ga_N ON Si(111) SUBSTRATES:
THE STRUCTURAL AND OPTICAL PROPERTIES.

V. N. Bessolov, V.Yu.Davydov, Yu.V.Zhilyaev, E.V.Konenkova, N.K.Poletaev, S.D.Raevskii, S.N.Rodin, S.L.Smirnov, S.Sharofidinov, M.P. Shcheglov, H.S. Park u M. Koike

13.00 – 13.15 Break

Chairman – M.G. Milvidskij

13.15 – 13.35 CVD TECHNOLOGY AND PRODUCTION FOR SOLID STATE LIGHTING

F. Schulte, B. Schineller, M. Heuken

13.35 – 13.50 ROLE OF COMPUTATION FLUID DYNAMIC IN THE NEW MOCVD EQUIPMENT AND PROCESS DEVELOPMENT FOR Ga_N MATERIALS

B. Mitrovic, A. Gurary, B. Quinn, E. Armour

13.50 – 14.05 TEMPERARURE MEASUREMENT AND CONTROL DURING DEPOSITION OF THE Ga_N RELARED MATERIALS

M. Belousov, B. Mitrovic, S. Ting, A. Gurary, B. Quinn

14.05 – 14.25 ON THE PHYSICS OF OPTICAL IN-SITU MONITORING OF MOVPE GROWTH PROCESSES FOR STATE-OF-THE-ART III-NITRIDE DEVICES

E. Steimetz, F. Brunner, T. Schenk, T. Trepk, and J.-T. Zettler

14.25 – 15.30 LUNCH

Evening Session 15.30 – 19.00
Department of Physics, Hohlov's Room

15.30 – 16.30 Epitaxy and bulk growth of III-N Materials
Chairman – A.A. Arendarenko

15.30 – 15.45 GROWTH OF GaN LAYERS BY HYDRIDE VAPOR PHASE EPITAXY

A.V. Govorkov, L.I. D'yakonov, Yu.P. Kozlova, A.V. Markov, M.V. Mezhennyi, A.Y. Polyakov, V.F. Pavlov, N.B. Smirnov, T.G. Yugova

15.45 – 16.00 PECULIARITIES OF AlN-GaN COMPOUNDS GROWTH KINETICS BY AMMONIA-BASED MOLECULAR BEAM EPITAXY

A.N. Alexeev, A.E. Byrnaz, D.M. Krasovitsky, M.V. Pavlenko, S.I. Petrov, Yu.V. Pogorelsky, I.A. Sokolov, M.A. Sokolov, M.V. Stepanov, A.P. Shkurko, V.P. Chaly

16.00 – 16.15 InGaN QW WITH HIGH PHOTOLUMINESCENCE EFFICIENCY IN THE 490-630 nm RANGE, GROWN BY MBE PA ON c-Al₂O₃

S.V. Ivanov, V.N. Jmerik, T.V. Shubina, S.B. Listoshin, A.M. Mizerov, A.A. Sitnikova, P.S. Kop'ev

16.15 – 16.30 PLASMA-ASSISTED MBE OF AlGaIn-BASED HETEROSTRUCTURES FOR LEDs OF UV SPECTRAL RANGE

Jmerik V.N., Semenov A.V., Mizerov A.M., Shubina T.V., Toropov A.A., Listoshin S.B., Sakharov A.V., Zamoryanskaya M.V., Kop'ev P.S., and Ivanov S.V.

16.30 – 16.45 BREAK

16.30 – 19.00 POSTER SESSION AND EXHIBITION

16.45 – 19.00 SPESIAL SESSION:
EXPIRIENCE OF MANUFACTURING, START-UP AND UTILIZATION OF
EPITAXIAL EQUIPMENT FOR III-N SEMICONDUCTORS IN RUSSIA

Chairman – O.P. Pchelyakov

FROM NITRIDE TECHNOLOGY VISION TO EQUIPMENT POWERS

A. Alexeev, L. Velikovskiy, Y. Pogorelsky, A. Filaretov, V. Chaly

UPGRAITING OF CBE MACHINE'S FOR GaN STRUCTURES GROWTH BY AMMONIA-MBE

V.V. Preobrazhenskii, M.A. Putyato, B.R. Semyagin, A.V. Vasev, V.G. Mansurov, K.S. Zhuravlev, A.I. Toropov, O.P. Pchelyakov

DEPOSITION OF GaN LAYERS BY UHF PLASMA

S. Shapoval, A. Kovalchuk, V. Borodin, V. Gorbunov, Zh. Savina

EXPIRIENCE OF UTILIZATION D-180 (VEECO) SETUP FOR GROWTH InGaIn/GaN LED STRUCTURES

Yu.N. Sweshnikov, R.B. Harlamov, I.N. Tsyplenkov

CREATION of III-N MOVPE SYSTEM

E.E. Zavarin, W.V. Lundin, M.A. Sinitsyn, and A.F. Tsatsulnikov

STARTUP AND EXPLOITATION of AIX2000HT MOCVD SYSTEM IN IOFFE INSTITUTE: EXPERIENCE AND ANALYSIS

W.V. Lundin, E.E. Zavarin, M.A. Sinitsyn, A.E. Nikolaev, and A.F. Tsatsulnikov

Discussion, short presentations from users of up to date growth equipment

19.00 – 20.50 – PARTY

Thursday, 01 February
Morning Session, 10.00 – 14.00
Department of Physics, Hohlov's Room

10.00 – 11.30 UNCOMMON III-N STRUCTURES AND RELATED MATERIALS
Chairman – V.G. Sidorov

10.00 – 10.10 Slideshow «NITRIDE NANOART» / Information

10.10 – 10.30 HYBRID II-O/III-N LIGHT-EMITTING DIODES: STATE OF THE ART AND ANALYSIS OF OPERATION

K. A. Bulashevich, I. Yu. Evstratov, S. Yu. Karpov

10.30 – 10.45 THE SUBLIMATION STUDY OF THE GROWTH PROCESS OF MONOCRYSTALS OF SILICON CARBIDE AND ALUMINIUM NITRIDE SOLID SOLUTIONS

B.A. Bilalov, G.D. Kardashova, M.A. Gitikchiev, Ya.A. Alimagomedov

10.45 – 11.00 THE EFFECT OF TRANSFORMATION OF POLYTYPE (β -SiC)-(α -SiC) DURING CARBONIZATION OF Si(111) SUBSTRATE

M.E. Kompan, S. A. Kukushkin, A. V. Osipov, I.G. Aksyanov, V.N. Bessolov, E.V. Konenkova, S. K. Gordeev, S. B. Korchagina

11.00 – 11.15 METHODS OF THE PREPARATION AND THE PROPERTIES ZnO FILMS

M.M. Mezdrogina, V.V. Krivolapchuk, E.Yu. Danilovsky, R.V. Kuzmin

11.15 – 11.30 VISIBLE AND INFRARED LUMINESCENCE IN WURTZITE CRYSTALS GaN WITH ADDITIONALLY INTRODUCED Zn AND Eu DOPANTS

M.M. Mezdrogina, V.V. Krivolapchuk, V.N. Petrov, Ju.V. Kozhanova, S.N. Rodin, E.Ju. Danilovsky, R.V. Kuzmin

11.30 – 11.45 BREAK

11.45 – 14.00 PROPERTIES OF III-N HETEROSTRUCTURES

Chairman – A.V. Saharov

11.45 – 12.05 OPTICALLY PUMPED LASERS BASED ON NITRIDES GROWN SILICON SUBSTRATES

E. V. Lutsenko

12.05 – 12.20 CHARACTERIZATION OF LIGHT EMITTING STRUCTURES WITH InGaN/GaN QUANTUM WELLS IN THE EBIC MODE OF SCANNING ELECTRON MICROSCOPE

E.B. Yakimov, N.M. Shmidt

12.20 – 12.35 INVESTIGATION OF DEFECTS WITH BRIGHT EBIC CONTRAST IN LIGHT EMITTING STRUCTURES InGaN/GaN.

N.M. Shmidt, P.S. Vergeles, E.B. Yakimov

12.35-12.50 OPTICAL AND ELECTRICAL PROPERTIES OF AlGaIn/GaN HETEROSTRUCTURES GROWN ON SILICON AND SAPPHIRE SUBSTRATES BY MOVPE

N. V. Rzhetskii, A. L. Gurskii, E. V. Lutsenko, V. N. Pavlovskii, G. P. Yablonskii, A. S. Shulenkov, A. I. Stognii, M. Heuken, B. Schineller, H. Kalisch, R. H. Jansen

12.50 – 13.05 LIGHT-INDUCED DIFFRACTION KINETICS AND PHOTOLUMINESCENCE IN EPITAXIAL GaN GROWN ON SAPPHIRE SUBSTRATES

V. N. Pavlovskii, E. V. Lutsenko, A. V. Danilchuk, G. P. Yablonskii, T. Malinauskas, R. Aleksiejūnas, K. Jarašiūnas, H. Kalisch, R. H. Jansen, B. Schineller, M. Heuken

13.05 – 13.20 BREAK

13.20 – 14.00 Late news, short presentations

14.00 – 15.00 Lunch

16.00-17.30 III-N BASED DEVICES

Chairman – V.G. Mokerov

16.00 – 16.15 III-N BASED TRANSISTORS / introduction

V.G. Mokerov

16.15 – 16.30 LOW NOISE AlGaIn/GaN HEMTs

I.M. Abolduyev, N.B. Gladysheva, A.A. Dorofeev, V.M. Minnebaev, Tchernyavsky A.A.

16.30 – 16.45 POWER MICROWAVE FIELD EFFECT TRANSISTOR BASED ON MULTILAYER HETEROSTRUCTURE AlN/AlGaIn/GaN/AlGaIn

A.N.Alexeev, S.B. Aleksandrov, D.E.Belyavsky, L.E. Velikovskiy, V.E.Zemlyakov, D.M.Krasovitskiy, V.A.Krasnik, S.I.Petrov, M.Yu.Pogorelskiy, V.A.Razumnaya, A.M.Temnov, A.G. Tkachenko, V.P.Chaly

16.45 – 17.00 MULTILAYER AlN/AlGaIn/GaN/AlGaIn HETEROSTRUCTURES WITH QUANTUM WELL CHANNEL FOR HIGH POWER MICROWAVE FIELD EFFECT TRANSISTORS

A.N.Alexeev, S.B. Aleksandrov, A.E.Byrnaz, L.E. Velikovskiy, I.E. Velikovskiy, D.M.Krasovitskiy, M.V.Pavlenko, S.I.Petrov, M.Yu. Pogorelskiy, Yu.V.Pogorelskiy, I.A.Sokolov, M.A.Sokolov, M.V.Stepanov, A.G. Tkachenko, A.P.Shkurko, V.P.Chaly

17.00 – 17.15 InGaAlN HETEROSTRUCTURES FOR HEMTs

A.V.Sakharov, W.V.lundin, E.E.Zaverin, M.A.Sinitsin, A.F.Tsatsulnikov

17.15 – 17.30 THE NEW GENERATION OF SEMICONDUCTOR MATERIALS WITH UTILIZATION OF MICRO- AND NANOCRYSTALLINE DIAMOND FILMS AND PLATES

A.A. Arendarenko, A.G. Vasiliev, V.N. Danilin, T.A. Zhukova, V.I. Konov, V.G.Ralchenko, A.V. Petrov, Yu.V.Kolkovskiy, A.L. Filatov

17.30-17.45 BREAK

17.45 – 18.30 III-N BASED DEVICES

Chairman – A.N. Kovalev

17.45 – 18.00 UV DETECTORS BASED ON AlN/AlGaIn HETEROSTRUCTURES

S.V. Averin, N.V. Alkeev

18.00 – 18.15 DEEP LEVEL IMPURITIES AND DEFECTS IN GROUP III-NITRIDES AND IN NITRIDE-BASED DEVICES

A.Y. Polyakov, N.B. Smirnov, A.V. Govorkov, M.G. Milvidskii

18.15 – 18.30 RADIATION DEFECTS FORMATION IN GALLIUM NITRIDE: EFFECTS OF CRYSTALLINE PERFECTION

A.Y. Polyakov, N.B. Smirnov, A.V. Govorkov, A.V. Markov, T.G. Yugova, N.G. Kolin, D.I. Merkurisov, V.M. Boiko, I-H. Lee, S.J. Pearton, V.T. Bublik, K.D. Sherbatchev, M.I. Voronova

18.45 – 20.50 – PARTY

Friday, 02 February
Morning Session, 10.00 – 13.40
Department of Physics, Hohlov's Room

10.00 – 11.15 III-N LEDs
Chairman – G.V. Itkinson

10.00 – 10.15 GaN-BASED STRUCTURES FOR OPTOELECTONICS AND ELECTRONICS
A.F.Tsatsulnikov, W.V.Lundin, E.E.Zavarin, A.V.Sakharov, D.S.Sizov, M.A.Sinitsyn

10.15 – 10.30 STUDY OF HIGH-INDIUM-CONTENT InGaN NANOINSERTIONS IN AlGaN MATRIX
V.S.Sizov, A.F.Tsatsulnikov, W.V.Lundin

10.30 – 10.45 ELECTROREFLECTANCE FROM InGaN/GaN/AlGaN p-n HETEROSTRUCTURES WITH QUANTUM WELLS
L.P.Avakiants, M.L.Badgutdinov, P.Yu.Bokov, A.V.Cherviakov, S.S.Shirokov, A.E.Yunovich

10.45 – 11.00 SPECTRA ANALYSIS AND EFFICIENCY OF BLUE LIGHT-EMITTING DIODES BASED ON p-n InGaN/AlGaN/GaN HETEROSTRUCTURES
M.L.Badgutdinov, S.S.Shirokov, A.E.Yunovich, M.G.Agapov, D.V.Davydov, D.A.Lavrinovich, F.M.Snegov

11.00 – 11.15 OPTIMIZATION OF GaAlN-p/GaInN/n-GaN HETEROSTRUCTURES ELECTROLUMINESCENCE PROPERTIES BY I-V CHARACTERISTICS
E.N.Vigdorovich and Yu.N.Sveshnikov

11.15 – 11.30 BREAK

11.30 – 13.40 III-N LEDs
Chairman – A.N. Turkin

11.30 – 11.50 LIGHTING WITH LEDs: ILLUMINATING INSIGHTS INTO THE SOLID-STATE LIGHTING MARKET
Tim Whitaker

11.50 – 12.10 LEDs OPTICAL CHARACTERISTICS MEASUREMENTS
R. Stolyarevskaya

12.10 – 12.25 PROBLEMS OF METROLOGICAL ASSURANCE OF LIGHT-EMITTING DIODES OPTICAL MEASUREMENTS
L. S. Lovinsky

12.25 – 12.40 POWERFUL LIGHT-EMITTING DIODES OF THE WHITE LUMINESCENCE WITH THE LIGHT STREAM UP TO 300 lm AND LIGHT FEEDBACK UP TO 70 lm/W
Kogan L.M., Galchina N.A., Rassohin I.T., Soschin N.P.

12.40 – 12.55 THE COMPARISON CHARACTERISTICS OF DIFFERENT PHOSPHOR CLASSES FOR WHITE LED.
N.P. Soschin

12.55 – 13.10 HIGH EFFICIENCY TERNARY PHOSPHORS FOR WHITE LIGHT EMITTING DIODES
R.B. Jabbarov, A.E. Yunovich, N.N. Musayeva, B.G. Tagiev, O.B. Tagiev

13.10 – 13.25 EFFICIENCY OF WHITE LIGHT-EMITTING DIODES
A. Feopentov, A. Bogdanov

13.25 – 13.40 OPTIMIZATION OF FABRICATION TECHNIQUE FOR REFLECTIVE CONTACTS IN HIGH-POWER FLIP-CHIP AlGaInN-BASED LEDs
I.P.Smirnova, D.A.Zakheim, M.M.Kulagina, E.M.Arakcheeva

13.40 – 15.00 LUNCH

Evening Session 15.30 – 19.00
Department of Physics, Hohlov's Room

15.00 – 16.45 LEDs and Lighting Systems
Chairman – W.V. Lundin

15.00 – 15.15 SOME APPROPRIATENESS OF BLUE InGaN/GaN LED DEGRADATION

S.A. Belnik, E.D. Vasilieva, D.V. Davydov, A.E. Chernyakov, P.S. Kop'ev, D.A. Lavrinovich, A.L. Zakgeim, F.M. Snegov, N.M. Shmidt, V.V.Uelin

15.15 – 15.30 RADIATIVE AND NONRADIATIVE RECOMBINATION DYNAMIC IN BLUE LED

A.A.Greshnov, A.E.Chernyakov, D.V.Davydov, A.P.Kartashova, D.A.Lavrinovich, F.M.Snegov, A.L.Zakgeim, V.V.Ratnikov, O.A.Soltanovic, N.M.Shmidt, E.B.Yakimov

15.30 – 15.45 COMPUTER SIMULATION of InGaN LEDs

O.I. Rabinovich, V.P.Sushkov, A.V. Shishov

15.45 – 16.00 ACTIVE REGION TEMPERATURE MEASUREMENTS FOR THE POWERFUL InGaN/GaN BASED LIGHT EMITTING DIODES BY LUMINESCENCE METHODS

A. V. Danilchuk, E. V. Lutsenko, V. N. Pavlovskii, N. V. Rzhetski, K. A. Osipau, G. P. Yablonskii

16.00 – 16.15 THERMAL PARAMETERS OF BLUE InGaN/GaN LIGHT-EMITTING DIODES

Y.A. Bumai, O.S. Vaskov, D.S. Domanevskii

16.15 – 16.30 THERMAL PROCESS ANALYSIS IN LED DEVICES

Yu.V. Trofimov, S.Yu. Nikitin, V.I. Tsvirko, V.K. Sivenkov, S.I. Lishik, O.Ya.Tichonenko

16.30 – 16.45 LED LIGHTING AND SIGNALING DEVICES FOR TRANSPORTATION AND TRAFFIC SAFETY SYSTEMS

Trofimov Yu. V., Posedko V.S., Lishik S.I., Tsvirko V.I., Pautino A.A.

CLOSING 16.50 - 17.10

Chairman – A.E. Yunovich

Secretary Information – A.N.Turkin, V.V. Lundin 16.50 - 17.00

Closing remark – P.S. Kop'ev 17.00 - 17.10

POSTER SESSION

31 JANUARY 16.30 – 19.00

1 FEBRUARY 13.05 – 14.00

HOHLOV's ROOM HALL

P 1 MODEL OF p-TYPE DOPING IN GaN MOVPE

E.V. Yakovlev, S.Yu. Karpov, R.A. Talalaev

P 2 PECULIARITIES OF PLASMA-ASSISTED MOLECULAR BEAM EPITAXY GROWTH OF AlGa_N ALLOYS

A.N. Semenov, V.N. Jmerik, A.M. Mizerov, S.V. Ivanov

P 3 FEATURES OF BULK ALUMINIUM NITRIDE CRYSTALS GROWTH

O.V. Avdeev, I.S. Barash, T.Yu. Chemekova, E.N. Mokhov, A.D. Roenkov, A.S. Segal, Yu.A. Vodakov, and Yu. N. Makarov

P 4 THE METAL-CERAMIC PACKAGE FOR GaN TRANSISTOR

V.A. Sidorov

P 5 DEPENDANCE BETWEEN WAVE-LENGTH AND THIKNESS OF InGa_N LAYERS IN MQWs

Ermoshin I., Sveshnokov Y., Kharlamov R.

P 6 WAYS OF INCREASING AlGaIn_N LED HETEROSTRUCTURE QUANTUM EFICIENCY AT HIGH PUMPING DENSITY

D.A.Zakheim, A.S.Pavljuchenko, W.V.Lundin

P 7 SUPPRESSION OF CARRIER LEAKAGE FROM THE ACTIVE REGION OF LIGHT-EMITTING HETEROSTRUCTURES BY GRADED-COMPOSITION BLOCKING LAYER

K. A. Bulashevich, S. Yu. Karpov, R. A. Suris

P 8 METHOD OF CONTROLLING POTENTIAL DEGRADATION OF AlGaIn_N LEDs CHARACTERISTICS

S.G.Nikiforov, V.P.Sushkov

P 9 EVOLUTION OF CARRIER DISTRIBUTION IN MQW InGa_N/Ga_N DURING DEGRADATION OF BLUE LIGHT EMITTING DIODES

M.G.Agapov, E.V.Bogdanova, D.V.Davydov, A.L.Zakgeim, D.A.Lavrinovich, F.M.Snegov, A.E.Chernyakov, N.M.Shmidt

P 10 INVESTIGATION of InGa_N and AlGaIn_P LEDs QUANTUM EFFICIENCY ON CURRENT DENSITY.

A.L.Archipov, V.S. Abramov, V.P.Sushkov, A.V. Shishov, A.N.Turkin

P 11 MEHANISM OF SERIES RESISTANCE FORMATION DURING CURRENT FLOW IN COMPENSATED LAYER OF WIDE-BANDGAP LEDs

F.I. Manyakhin

P 12 ANALYSIS OF LOW ENERGY SIDE OF ELECTROLUMINESCENCE (EL) SPECTRA OF LIGHT-EMITTING DIODES WITH SINGLE InGa_N QUANTUM WELL

D.S. Domanevskii, V.A. Vilkotskii, U.V. Trophimov, B.G. Arnaudov, R.D. Kakanakov, S.A. Manego

P12 LED MODULS, LINEAR ARRAYS AND WHITE-LIGHT LAMPS

L.M.Kogan, G.V.Puzachev, I.T.Rassohin, S.D.Yakubovskii

P 13 ABOUT METHODS AND PROGRAMS OF ILLUMINATION'S CALCULATIONS OF WORK-PLACES FROM LIGHT-EMITTING DIODE MODULES

E.M. Gutzeit

P 14 "TWO-RESONANT" HYSTERESIS OF A TUNNEL CURRENT IN HETEROSTRUCTURE w-GaN/AlGaN (0001)

A.N.Razhvalov, S.N.Griniaev

P 15 STUDY OF HVPE GaN EPILAYERS STRUCTURE BY METALLOGRAPHIC AND X-RAY METHODS

L.I.Dyakov, Yu.H.Kozlova, A.V.Markov, M.V.Mezhennyi, V.F.Pavlov, T.G.Yugova

P 16 ELECTRICAL PROPERTIES OF SEMI-INSULATING GaN (Fe) LAYERS GROWN BY MOLECULAR BEAM EPITAXY

A.Y. Polyakov, N.B. Smirnov, A.V. Govorkov, A.V. Markov, A.M. Dabiran, A.M. Wowchak, P.P. Chow

P 17 ELECTROPHYSICAL PROPERTIES OF SOLID SOLUTIONS $\text{In}_x\text{Ga}_{1-x}\text{N}$

T.A. Komissarova, N.N. Matrosov, L.I. Ryabova, D.R. Khokhlov, V.N. Jmerik, S.V. Ivanov

P 18 LATTICE DYNAMICS AND RAMAN SPECTRA OF InGaN ALLOYS

A.N. Smirnov, V.Yu. Davydov, I.N. Goncharuk, M.A. Yagovkina, E.E. Zavarin, M.A. Sinitsyn, and M.B. Smirnov

P 19 ACCUMULATION OF STRUCTURAL DEFECTS IN MBE GaN LAYERS DURING ERBIUM ION IMPLANTATION

N.A. Sobolev, V.I. Sakharov, I.T. Serenkov

P 20 A SENSITIZATION OF EMISSION AND MIGRATIONS MECHANISM OF THE EXCITATIONS ELECTRONS IN THE QUANTUM WELLS InGaN/GaN DOPED WITH Eu

V.V. Krivolapchuk, M.M. Mezdrogina, W.V. Lundin

P 21 THE EFFECT THE MIGRATIONS EXCITATION AND THE CAPTURE OF THE CARRIERS ON THE PHOTOLUMINESCENCE SPECTRA IN WURTZITE CRYSTALS GaN DOPED WITH Eu, Er

M.M. Mezdrogina, V.V. Krivolapchuk, Ju.V. Kozhanova, V.N. Petrov, S.N.Rodin, A.E. Cherenkov

P 22 MODELS OF CONDUCTIVITY, EFFECT OF REINFORCEMENT THE DIELECTRIC PERMEABILITY AND OPTICAL CHARACTERISTICS NITRID ALUMINUM IN CARBIDE OF SILI-CON (SiC)_{1-x}(AlN)_x

Altukhov V.I., Bilalov B.A., Kazarov B.A., Safaraliev G.K.

P 23 FORMATION OF NEW TYPE "CHAIN-LIKE" REGULAR NANOSTRUCTURES ON n-GaN(0001) SURFACE

G.V. Benemanskaya, V.S. Vikhnin, M.N. Lapushkin, N.M. Shmidt

P 24 ELECTRONIC PROPERTIES AND ENERGETIC PARAMETERS OF 2D ACCUMULATION LAYERS OF Cs, Ba/n-GaN (0001) INTERFACES

G.V. Benemanskaya, M.N. Lapushkin, S.N. Timoshnev

P 25 INVESTIGATIONS OF THE PHOTOLUMINESCENCE SPECTRA TEMPERATURE DEPENDENCES FROM InGaN QUANTUM DOTS

S.O. Usov, A.F. Tsatsulnikov, W.V. Lundin, A.V. Sakharov, E.E. Zavarin, E.M. Arakcheeva, N.N. Ledentsov