JINGYU LIN

Linda F. Whitacre Endowed Chair and Horn Distinguished Professor
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Professional Appointments

Linda F. Whitacre Endowed Chair and Horn Distinguished Professor, Electrical and Computer Engineering, Texas Tech University, 2014 – current
(Horn Professorships, the highest honor Texas Tech University may bestow on members of its faculty: http://www.swco.ttu.edu/university_archive/uacollections11.html)

Linda F. Whitacre Endowed Chair and Professor, Electrical and Computer Engineering, Texas Tech University, 2008-2014

Co-Director, Center for Nanophotonics, Texas Tech University (Center Founded 09/2010)

Professor of Physics, Kansas State University, 2002-2008

Associate Professor of Physics, Kansas State University, 1997-2002

Assistant Professor of Physics, Kansas State University, 1992-1997

Assistant Professor of Physics, University of Northern Iowa, 1991-1992

Research Associate, Kansas State University, 1989-1991

Education

B. S. in Physics, State University of New York, College at Oneonta, 1980-1983
M. S. in Physics, Syracuse University, 1983-1985
Ph. D. in Physics, Syracuse University, 1985-1989

Awards, honors, and special appointments

- Elected Fellow of the American Physical Society, 2012
- Elected Fellow of the Optical Society of America, 2016
- Elected Fellow of the SPIE - the international society for optics and photonics, 2017
- Horn Professor, Texas Tech University (TTU), 2014 –
- Barnie E. Rushing, Jr. Faculty Distinguished Research Award, TTU, 2014
- Linda F. Whitacre Endowed Chair, TTU, 2008 –
- NSF Career Advancement Award, 1994
- Sloan-Mentor Award, Kansas State University, 1993-1994
- Senate Research Award, Syracuse University, 1986
- B.S. degree with highest honor, SUNY at Oneonta, 1983
- Member of Advisory Board of Science and Technology Council of Wenzhou, China, 2009-2013
- External Departmental Academic Advisor, Department of Applied Physics of The Hong Kong Polytechnic University, academic years 2016/17 to 2018/19

Biographic Reference: Who's Who in America

Research Grants:

Over the past two decades, in addition to the continuous support from DOE and NSF for conducting fundamental research in photonic materials and devices, our research group has been an active member of important R & D programs in the United States related to the development of III-nitride material and device technologies, including DARPA's Semiconductor Ultra-Violet Optical Sources (SUVOS), Deep Ultraviolet Avalanche Photodetectors (DUVAP), Visible InGaN Injection Lasers (VIGIL), and Compact Mid Ultraviolet Technology (CMUVT) programs, MDA's GaN Microwave Power Amplifier (GAMPA) program, DHS's ARI program to develop semiconductor neutron detectors, and is currently involved in the High Energy Laser program of the Joint Technology Office (JTO).

- Secured over $11 million in federal research funding to Texas Tech University for conducting research in areas of wide bandgap semiconductors and associated photonic and sensing devices (08/2008-present)
- Conducted research in areas of wide bandgap semiconductors and associated photonic devices at Kansas State University (Total ~ $15 million, 1992-2008)

Courses Taught

Graduate Courses:	Nanophotonics I Nanophotonics II Functional Materials Advanced Topics in Physics: Semiconductor Physics Solid State Physics Solid State Seminar
Upper-level Undergraduate Courses:	Semiconductor Physics Introduction to Quantum Mechanics Modern Physics Physics of Solids
Undergraduate Service Courses:	General Physics I (targeted for life science majors); General Physics II (targeted for life science majors); Physical World (targeted for non-science majors); General Physics Recitation (Problem solving session); Engineering Physics Recitation (targeted for engineering & physics majors)

Students and Postdoctoral Researchers Mentored > 50

Exchange Graduate Students Hosted: 6

Undergraduate Researchers Mentored: 9

High School Students Mentored: 2

Visiting Professors Hosted: 12

Professional Activities/Services

Co-Founder/Owner: III-N Technology, Inc. (3N) and AC-LED Lighting, L.L.C. 3N develops proprietary next-generation photonic devices for advanced lighting and compact displays. In particular, 3N has invented and built up a comprehensive patent portfolio of micro-LED based single-chip high voltage AC/DC-LEDs. High voltage AC-LEDs can be plugged directly into standard power outlets or lamp

sockets without power conversion and address the key compatibility issue between LEDs and AC power grid infrastructure, while the single-chip high voltage DC LEDs have a broad range of commercial applications, including automobile headlights. 3N has facilitated the commercialization of AC-LED technology through its related entity AC-LED Lighting, L.L.C. and the novel device architecture is being adopted by LED manufactures worldwide for energy efficient solid-state lighting applications. 3N has also developed and patented novel self-emissive microdisplays for future ultra-portable products such as next generation pico-projectors, wearable displays, and head-up displays.

Panelist: NSF, German Research Foundation, ARO
Proposal reviewed for: NSF, DOE, DOD, NRC, German Research Foundation (DFG), Dutch Technology Foundation, Polish Research Foundation, and National Natural Science Foundation of China
Journal reviewed for: Appl. Phys. Lett.; J. Appl. Phys.; IEEE Trans. Electron Devices; IEEE J. Quantum. Electronics; IEEE Trans. Nuclear Science; J. Mat. Res.; IEEE Photonics Technology Letters; Thin Solid Films; ACS Nano; Applied Optics, J. Crystal Growth, Materials Letters, Physica Status Solidi, etc.

Meeting organized: Organized 15 national and international conferences, including the 1st APS March Meeting Focused Session on Nanophotonics: Optical properties of nano-structures and nanophotonics, 2004 (Chair and Organizer).

Patents (link)

1 "Persistent photoconductivity quenching effect crystals and electrical apparatus using same," U.S. Patent #5,101,109; Application date: 10/15/1990.
2 "Charge storage imaging devices using persistent photoconductivity crystals," U.S. Patent #5,072,122; Application date: 10/15/1990.
3 "Micro-size LED and detector arrays for mini-displays, hyperbright light emitting diodes, lighting, and UV detector and imaging sensor applications," U.S. Patent #6,410,940; Application date: 06/15/2000.
4 "Micro-size LED and detector arrays for mini-displays, hyperbright light emitting diodes, lighting, and UV detector and imaging sensor applications," Korean patent #0802764; Application date: 12/11/2002.
5 "Light emitting diodes for high AC voltage operating and general lighting," US Patent #6,957,899; Application date: 10/24/2002.
6 "Light emitting diodes for high AC voltage operating and general lighting," US patent 7,210,819, issued in 2007; Application date: 04/19/2005.
7 "Light emitting diodes for high AC voltage operating and general lighting," US patent 7,213,942; Application date: 05/03/2005.
8 "Nitride microlens and arrays for blue and uv wavelength applications," U.S. Patent 7,193,784; Application date: 05/20/2004.
9 "Heterogeneous integrated high voltage DC/AC light emitter," US patent 7,221,044; Application date: 01/21/2005.
10 "Method and apparatus for use of III-Nitride wide bandgap semiconductors in optical communications," US patent #7,345,812; Application date: 02/21/2004.
11 "Micro-LED based high voltage AC/DC indicator lamp," US patent 7,535,028; Application date: 04/08/2005.
12 "Extreme ultraviolet (EUV) detectors based upon aluminum nitride (AIN) wide bandgap semiconductors," US patent 7,498,645; Application date: 10/04/2007.
13 "Micro-LED based high voltage AC/DC indicator lamp, "基于微型发光二极管的高压交直流指示灯," Chinese patent CNZL200510098257.6; Application date: 09/05/2005.
14 "AC/DC light emitting diodes with integrated protection mechanism," US patent 7,714,348; Application date: 05/10/2007.

15 "Micro-emitter array based full-color microdisplay," US patent 8,058,663; Application date: 09/26/2007.
16 "Er doped III-nitride materials and devices synthesized by MOCVD," US patent 8,227,328; Application date: 08/24/2007.
17 "Light emitting diode lamp capable of high AC/DC voltage operation," US patent 8,272,757; Application date: 06/03/2005.
18 "CMOS IC for micro-emitter based microdisplay," US patent 9,047,818, Application date: 03/12/2011.
19 "Structures and devices based on boron nitride and boron nitride-III-nitride heterostructures," US patent 9,093,581; Application date: 05/29/2012.

Patents pending

20 "AC/DC light emitting diodes with integrated protection mechanism," European Patent Application No. 07798009.2 (2080236); Regional Phase of PCT Application PCT/US2007/070213.

Patent disclosures filed

1. "Optical Hearing Device Based on Micro-LED Arrays," filed May 2009.

Selective Press Coverage Our Research Work

Our group's research work on micro-size UV emitters has been reported in German, Japanese, Russian, French, Italian, Indian, British, Portuguese, and Chinese technical magazines, in addition to press releases by media outlets including The New York Times, CNN.com, ABCnews.com and USA Today. Our recent achievement of thermal neutron detectors with 51.4% detection efficiency based on B-10 enriched h-BN epilayers has been reported by more than 20 scientific and technical media outlets, including AIP, AAAS (EurekAlert), APS (Physics.org), etc. For more detailed information link to http://www2.ece.ttu.edu/nanophotonics/.

Invited Talks/Short Courses/Tutorials (Total: 90)

Publications and Citations

Total publications: 384
Citations: >14,000
H-Index: 68 (as of 01/2017, according to Google Scholar Citations for Jingyu Lin)
Research ID: A-7276-2011

List of Publications (Journal articles, book chapters, invited review articles and conference proceedings) (*indicating conference proceedings)
(link to http://www2.ece.ttu.edu/nanophotonics/index.html to download a copy of an article):

384. V. Ho, T. H. Dao, H. X. Jiang, J. Y. Lin, J. Zavada, S. McGill, and N. Vinh, "Photoluminescence quantum efficiency of Er optical centers in GaN epilayers," Scientific Reports, 7, 39997 (2017). doi:10.1038/srep39997 I PDF
383. V. X. Ho, S. P. Dail, T. V. Dao, H. X. Jiang, J. Y. Lin, J. M. Zavada, and N. Q. Vinh, "Temperature dependence studies of Er optical centers in GaN epilayers grown by MOCVD," MRS Advances, pp. 1-6 (2017). doi:10.1557/adv.2017.27 I PDF
382. Q. W. Wang, J. Li, J. Y. Lin, and H. X. Jiang, "Enhancement of 1.5 μm emission under 980nm resonant excitation in Er and Yb co-doped GaN epilayers," Appl. Phys. Lett. 109, 152103 (2016). doi: 10.1063/1.4964843 I PDF
381 T. M. Al tahtamouni, J. Li, J. Y. Lin, and H. X. Jiang, "Current injection 1.54 μm light-emitting devices based on Er-doped GaN/AlGaN multiple quantum wells," Optical Materials Express 6, 3476 (2016). doi: 10.1364/OME.6.003476 I PDF
380. T. C. Doan, J. Li, J. Y. Lin, and H. X. Jiang, "Bandgap and exciton binding energies of hexagonal boron nitride probed by photocurrent excitation spectroscopy," Appl. Phys. Lett. 109, 122101 (2016). doi: 10.1063/1.4963128 I PDF
379. H. X. Jiang and J. Y. Lin, "Review—Hexagonal Boron Nitride Epilayers: Growth, Optical Properties and Device Applications," ECS J. Solid State Sci. Technol. 6, Q3012 (2017). doi: 10.1149/2.0031702jss I PDF
378. A. Maity, T. C. Doan, J. Li, J. Y. Lin, and H. X. Jiang, "Realization of highly efficient hexagonal boron nitride neutron detectors," Appl. Phys. Lett. 109, 072101 (2016). doi: 10.1063/1.4960522 I PDF I News
377. Z. Y. Sun, J. Li, W. P. Zhao, J. Y. Lin, and H. X. Jiang, "Toward the realization of erbium-doped GaN bulk crystals as a gain medium for high energy lasers," Appl. Phys. Lett. 109, 052101 (2016). doi: 10.1063/1.4960360 I PDF
376. T. C. Doan, J. Li, J. Y. Lin, and H. X. Jiang, "Growth and device processing of hexagonal boron nitride epilayers for thermal neutron and deep ultraviolet detectors," AIP Advances 6, 075213 (2016). doi: 10.1063/1.4959595 I PDF
375. * D. K. George, M. D. Hawkins, H. X. Jiang, J. Y. Lin, J. M. Zavada, and N. Q. Vinh, "Optical excitation of Er centers in GaN epilayers grown by MOCVD," Proc. SPIE 9744, Optical Components and Materials XIII, 97440V (2016); invited. doi:10.1117/12.2209695 I PDF
374. N. Napal, H. X. Jiang, J. Y. Lin, B. Mitchell, V. Dierolf, and J. M. Zavada, "MOCVD growth of Er-doped III-N and optical-magnetic characterization," *Chapter 7* in *"Rare Earth and Transition Metal Doping of Semiconductor Materials: Synthesis, Magnetic Properties and Room Temperature Spintronics,"* edited by V. Dierolf, I. T. Ferguson, and J. M. Zavada, Woodhead Publishing, Elsevier, 2016, pp. 225-255.
373. J. Li, X. K. Cao, T. B. Hoffman, J. H. Edgar, J. Y. Lin, and H. X. Jiang, "Nature of exciton transitions in hexagonal boron nitride," Appl. Phys. Lett. 108, 122101 (2016). doi: 10.1063/1.4944696 I PDF
372. X. Z. Du, J. Li, J. Y. Lin, and H. X. Jiang, "The origins of near band-edge transitions in hexagonal boron nitride epilayers," Appl. Phys. Lett. 108, 052106 (2016). doi: 10.1063/1.4941540 I PDF
371. * H. X. Jiang and J. Y. Lin, "InGaN/GaN multiple quantum well solar cells for energy and hydrogen generation," ECS Transactions 66, 129 (2015); invited. doi: 10.1149/06601.0129ecst I PDF
370. D. K. George, M. D. Hawkins, M. McLaren, H. X. Jiang, J. Y. Lin, J. M. Zavada, and N. Q. Vinh, "Excitation mechanisms of Er optical centers in GaN epilayers," Appl. Phys. Lett. 107, 171105 (2015). doi: 10.1063/1.4934760 I PDF

369. H. X. Jiang and J. Y. Lin, "InGaN/GaN multiple quantum well solar cells for energy and hydrogen generation," ECS Transactions, 66, 129 (2015). doi: 10.1149/06601.0129ecst I PDF
368. M. R. Uddin, J. Li, J. Y. Lin, and H. X. Jiang, "Carbon-rich hexagonal (BN)C alloys," J. Appl. Phys. 117, 215703 (2015). doi: 10.1063/1.4921931 I PDF
367. A. T. Connie, S. Zhao, S. Md. Sadaf, I. Shih, Z. Mi, X. Z. Du, J. Y. Lin, and H. X. Jiang, "Optical and electrical properties of Mg-doped AlN nanowires grown by molecular beam epitaxy," Appl. Phys. Lett. 106, 213105 (2015). doi: 10.1063/1.4921626 I PDF
366. J. H. Seo, J. Li, J. Lee, S. Gong, J. Y. Lin, H. X. Jiang, and Z. Ma, "A Simplified Method of Making Flexible Blue LEDs on a Plastic Substrate," IEEE Photonics Journal, 7, 8200207 (2015). doi: 10.1109/JPHOT.2015.2412459 I PDF
365. T. M. Al tahtamouni, M. Stachowicz, J. Li, J. Y. Lin and H. X. Jiang, "Dramatic enhancement of 1.54 μm emission in Er doped GaN quantum well structures," Appl. Phys. Lett. 106, 121106 (2015). doi: 10.1063/1.4916393 I PDF
364. T. C. Doan, S. Majety, S. Grendadier, J. Li, J. Y. Lin, and H. X. Jiang, "Hexagonal boron nitride thin film thermal neutron detectors with high energy resolution of the reaction products," Nuclear Inst. and Methods in Physics Research Section A 783, 121 (2015). doi: 10.1016/j.nima.2015.02.045 I PDF
363. T. M. Al tahtamouni, X. Z. Du, J. Y. Lin, and H. X. Jiang, "Erbium-doped AlN epilayers synthesized by metal-organic chemical vapor deposition," Optical Materials Express 5, 648 (2015). doi: 10.1364/OME.5.000648 I PDF
362. D. W. Jeon, Z. Y. Sun, J. Li, J. Y. Lin, and H. X. Jiang, "Erbium doped GaN synthesized by hydride vapor-phase epitaxy," Optical Materials Express, 5, 596 (2015). doi: 10.1364/OME.5.000596 I PDF
361. X. Z. Du, J. Li, J. Y. Lin, and H. X. Jiang, "The origin of deep-level impurity transitions in hexagonal boron nitride," Appl. Phys. Lett. 106, 021110 (2015); doi: 10.1063/1.4905908.
360. T. M. Al tahtamouni, X. Z. Du, J. Li, J. Y. Lin and H. X. Jiang, "Erbium-doped a-plane GaN epilayers synthesized by metal-organic chemical vapor deposition," Optical Materials Express **5**, 274 (2015). doi: 10.1364/OME.5.000274 I PDF
359. T. N. Oder, J. Y. Lin, and H. X. Jiang, "III-nitride photonics crystals for lighting applications," Chapter 6 in "Handbook of Microcavities" (edited by A. H. W. Choi, Pan Stanford Publishing, 2015), ISBN 978-981-4463-24-9 (Hardcover), 978-981-4463-25-6 (ebook).381.
358. T. C. Doan, J. Li, J. Y. Lin, and H. X. Jiang, "Charge carrier transport properties in layer structured hexagonal boron nitride," AIP Advances4, 107126 (2014) doi: 10.1063/1.4898630 I PDF
357. M. R. Uddin, T. C. Doan, J. Li, K. S. Ziemer, J. Y. Lin, and H. X. Jiang, "Electrical transport properties of (BN)-rich (BN)C semiconductor alloys," AIP Advances, 4,087414 (2014). doi: 10.1063/1.4893992 I PDF
356. S. Alajlouni, Z. Y. Sun, J. Li, J. M. Zavada, J. Y. Lin, and H. X. Jiang, "Refractive index of erbium doped GaN thin films," Appl. Phys. Lett.105, 081104 (2014) doi: 10.1063/1.4893992 I PDF
355. R. Hui, R. Xie, I. W. Feng, Z. Y. Sun, J. Y. Lin, and H. X. Jiang, "Excitation cross section of erbium-doped GaN waveguides under 980nm optical pumping," Appl. Phys. Lett. 105, 051106 (2014) doi: 10.1063/1.4892427 I PDF
354. M. Stachowicz, A. Kozanecki, C. -G. Ma, M. G. Brik, J. Y. Lin, H. X. Jiang, and J. M. Zavada, "Crystal field analysis of rare-earth ions energy levels in GaN," Optical Materials (2014) doi: 10.1016/j.optmat.2014.05.018 I PDF
353. J. H. Edgar, T. B. Hoffman, B. Clubine, M. Currie, X. Z. Du, J. Y. Lin, and H. X. Jiang, "Characterization of bulk hexagonal boron nitride single crystals grown by the metal flux technique," J. Crystal Growth (2014) doi: 10.1016/j.jcrysgro.2014.06.006 I PDF
352. H. X. Jiang, and J. Y. Lin, "Hexagonal boron nitride for deep ultraviolet photonic devices," Semicon. Sci. Technol. 29, 084003 (2014), *Invited review*. doi: 10.1088/0268-1242/29/8/084003 I PDF
351. L. B. Tang, R. B. Ji, X. M. Li, G. X. Bai, C. P. Liu, J. H. Hao, J. Y. Lin, H. X. Jiang, K. S. Teng, Z. B. Yang, and S. P. Lau, "Deep Ultraviolet to Near-Infrared Emission and Photoresponse in Layered N-Doped Graphene Quantum Dots," ACS NANO 36, 1730 (2014). doi: 10.1021/nn501796r I PDF

350. Q. Wang, S. Zhao, A. T. Connie, I. Shih, Z. Mi, T. Gonzalez, M. P. Andrews, X. Z. Du, J. Y. Lin, and H. X. Jiang, "Optical properties of strain-free AlN nanowires grown by molecular beam epitaxy on Si substrates," Appl. Phys. Lett. 104, 223107 (2014). doi: 10.1063/1.4881558 I PDF
349. T. M. Al tahtamouni, J. Y. Lin, and H. X. Jiang, "Effects of Mg-doped AlN/AlGaN superlattices on properties of p-GaN contact layer and performance of deep ultraviolet light emitting diodes," AIP Advances 4, 047122 (2014). doi: 10.1063/1.4871996 I PDF
348. R. Dahal, B. N. Pantha, J. Li, J. Y. Lin, and H. X. Jiang, "Realizing InGaN monolithic solar-photoelectrochemical cells for artificial photosynthesis," Appl. Phys. Lett. 104, 143901 (2014). doi: 10.1063/1.4871105 I PDF
347. M. Stachowicz, A. Kozanecki, J. Y. Lin, H. X. Jiang, and J. Zavada, "Probing of local alloy disorder in InGaN using Er^{3+} ions," Optical Materials36, 1730 (2014) doi: 10.1016/j.optmat.2014.02.013 I PDF
346. M. R. Uddin, S. Majety, J. Li, J. Y. Lin, and H. X. Jiang, "Layer-structured hexagonal (BN)C semiconductor alloys with tunable optical and electrical properties," J. Appl. Phys. 115, 093509 (2014). doi: 10.1063/1.4867641 I PDF
345. T. C. Doan, S. Majety, S. Grendadier, J. Li, J. Y. Lin, and H. X. Jiang, "Fabrication and characterization of solid-state thermal neutron detectors based on hexagonal boron nitride epilayers," Nuclear Inst. and Methods in Physics Research Section A 748, 84 (2014). doi: 10.1016/j.nima.2014.02.031 I PDF
344. X. Z. Du, C. D. Frye, J. H. Edgar, J. Y. Lin, and H. X. Jiang, "Temperature dependence of the energy bandgap of two-dimensional hexagonal boron nitride probed by excitonic photoluminescence, " J. Appl. Phys. 115, 053503 (2014) doi:10.1063/1.4863823 I PDF
343. S. Majety, T. C. Doan, J. Li, J. Y. Lin, and H. X. Jiang, "Electrical transport properties of Si-doped hexagonal boronnitride epilayers," AIP Advances 3, 122116 (2013). doi:10.1063/1.4860949 I PDF
342. S. Majety, T. C. Doan, J. Li, J. Y. Lin, and H. X. Jiang, "Electrical transport properties of Si-doped hexagonal boronnitride epilayers," AIP Advances 3, 122116 (2013). doi:10.1063/1.4860949 I PDF
341. X. K. Cao, B. Clubine, J. H. Edgar, J. Y. Lin, and H. X. Jiang, "Two-dimensional excitons in three-dimensional hexagonal boron nitride," Appl. Phys. Lett. 103, 191106 (2013). doi:10.1063/1.4829026 I PDF
340. S. Grenadier, J. Li, J.Y. Lin, and H.X. Jiang, "Dry Etching Techniques for Active Devices Based on Hexagonal Boron Nitride Epilayers," J. Vac. Sci. Technol. A31, 061517 (2013). doi:10.1116/1.4826363 I PDF
339. I. W. Feng, S. X. Jin, J. Li, J. Y. Lin, and H. X. Jiang, "SiO_2/TiO_2 distributed Bragg reflector near 1.5 μm fabricated by e-beam evaporation," J. Vac. Sci. Technol. A31, 061514 (2013). doi:10.1116/1.4823705 I PDF
338. I. W. Feng, W. P. Zhao, J. Li, J. Y. Lin, H. X. Jiang, and J. Zavada, "Correlation between the optical loss and crystalline quality in erbium-doped GaN optical waveguides," Applied Optics 52, 225426 (2013) doi:10.1364/AO.52.005426 I PDF
337. S. Majety, J. Li, W. P. Zhao, B. Huang, S. H. Wei, J. Y. Lin and H. X. Jiang, "Hexagonal boron nitride and 6H-SiC heterostructures," Appl. Phys. Lett. 102, 213505(2013). doi:10.1063/1.4808365 I PDF
336. H. X. Jiang and J. Y. Lin, "Nitride micro-LEDs and beyond - a decade progress review," Optics Express, Optics Express 21, A475 (2013) (invitation only).
335. T. Tong, D. Fu, A. X. Levander, W. J. Schaff, B. N. Pantha, B. Liu, R. Zhang, J. Y. Lin, H. X. Jiang, J. Wu, David. G. Cahill "Suppression of thermal conductivity in InxGa1-xN alloys by nanometer-scale disorder" Appl. Phys. Lett., Appl. Phys. Lett. 102, 121906 (2013). doi:10.1063/1.4798838 I PDF
334. * X. K. Cao, S. Majety, J. Li, J. Y. Lin and H. X. Jiang, "Optoelectronic properties of hexagonal boron nitride epilayers," Proc. SPIE 8631, 863128 (2013); invited. doi:10.1117/12.2009115 I PDF
333. T. M. Al tahtamouni, J. Y. Lin and H. X. Jiang, "Effects of double layer AlN buffer layers on properties of Si-doped $Al_xGa_{1-x}N$ for improved performance of deep ultraviolet light emitting diodes," J. Appl. Phys. 113, 123501 (2013). doi:10.1063/1.4798239 I PDF
332. I. W. Feng, Jing Li, J. Y. Lin, H. X. Jiang and J. Zavada, "Optical excitation cross section of erbium in GaN," Applied Optics, **52**, 61132 (2013). doi:10.1364/AO.52.001132 I PDF

331. T. M. Al tahtamouni, J. Y. Lin, and H. X. Jiang, "High quality AlN grown on double layer AlN buffers on SiC substrate for deep ultraviolet photodetectors," Appl. Phys. Lett.101, 192106 (2012). doi:10.1063/1.4766732 I PDF

330* S. Majety, J. Li, X. K. Cao, R. Dahal, J. Y. Lin, H. X. Jiang,"Metal-semiconductor-metal neutron detectors based on hexagonal boron nitride epitaxial layers," Proc. SPIE 8507, 85070R (2012). doi:10.1117/12.940748 I PDF

329. J. Li, S. Majety, R. Dahal, W.P. Zhao, J. Y. Lin, and H. X. Jiang, "Dielectric strength, optical absorption, and deep UV detectors of hexagonal boron nitride epilayers," Appl. Phys. Lett. 101, 171112 (2012). http://dx.doi.org/10.1063/1.4764533.

328. B. Huang, H. X. Jiang, X. K. Cao, J. Y. Lin, and Su-Huai Wei, "Origin of the significantly enhanced optical transitions in layered boron nitride," Phys. Rev. B 86, 155202 (2012). doi:10.1103/PhysRevB.86.155202 I PDF

327. S. Majety, X. K. Cao, J. Li, R. Dahal, J. Y. Lin, and H. X. Jiang, "Band-edge transitions in hexagonal boron nitride epilayers," Appl. Phys. Lett. 101, 051110 (2012). doi:10.1063/1.4742194 I PDF

326. C. Ugolini, I. W. Feng, A. Sedhain, J. Y. Lin, H. X. Jiang, "Formation energy of optically active Er^{3+} centers in Er doped GaN," Appl. Phys. Lett. 101, 051114 (2012). doi:10.1063/1.4742196 I PDF

325. I-Wen Feng, Jing Li, Jingyu Lin, Hongxing Jiang and John Zavada, "Effects of growth pressure on erbium doped GaN infrared emitters synthesized by metal organic chemical vapor deposition," Optical Materials Express, Optical Materials Express 2, 1095 (2012). doi:10.1364/OME.2.001095 I PDF

324. T. M. Al Tahtamouni, J. Y. Lin, and H. X. Jiang, " Optical polarization in c-plane Al-rich $AlN/Al_xGa_{1-x}N$ single quantum wells," Appl. Phys. Lett. 101, 042103 (2012). doi:10.1063/1.4737941 I PDF

323. T. M. Al Tahtamouni, J. Li, J. Y. Lin, and H. X. Jiang, "Surfactant effects of gallium on quality of AlN epilayers grown via metal-organic chemical-vapour deposition on SiC substrates," J. Phys. D: Appl. Phys. 45, 285103 (2012). doi:10.1088/0022-3727/45/28/285103 I PDF

322. A. Sedhain, J. Y. Lin, and H. X. Jiang, "Nature of optical transitions involving cation vacancies and complexes in AlN and AlGaN," Appl. Phys. Lett. 100, 221107 (2012). doi:10.1063/1.4723693 I PDF

321. Libin Tang, Rongbin Ji, Xiangke Cao, Jingyu Lin, Hongxing Jiang, Xueming Li, Kar Seng Teng, Chi Man Luk, Songjun Zeng, Jianhua Hao, and Shu Ping Lau, "Deep Ultraviolet Photoluminescence of Water-Soluble Self-Passivated Graphene Quantum Dots," ACS Nano, 6, 5102 (2012). doi:10.1021/nn300760g I PDF

320. * S. Majety, X. K. Cao, R. Dahal, B. N. Pantha, J. Li, J. Y. Lin and H. X. Jiang, "Semiconducting hexagonal boron nitride for deep ultraviolet photonics," Proc. SPIE 8268, 82682R (2012) ; invited. doi:10.1117/12.914084 I PDF

319. * J. Day, J. Li, D. Y. C. Lie, C. Bradford, J. Y. Lin and H. X. Jiang, "Full-Scale Self-Emissive Blue and Green Microdisplays Based on GaN Micro-LED Arrays," Proc. SPIE 8268, 82681X (2012) ; invited. doi:10.1117/12.914061 I PDF

318. B. N. Pantha, J. Y. Lin, and H. X. Jiang, "High qaulity Al-rich AlGaN alloys," Chapter 2 in *GaN and ZnO-based Materials and Devices,* edited by S.J. Pearton, published in February 2012 by Springer, Springer Series in Materials Science (ISBN: 978-3-642-23520-7).

317. S. Majety, J. Li, X. K. Cao, R. Dahal, B. N. Pantha, J. Y. Lin, and H. X. Jiang, "Epitaxial growth and demonstration of hexagonal BN/AlGaN p-n junctions for deep ultraviolet photonics," Appl. Phys. Lett. 100, 061121 (2012).doi:10.1063/1.3682523 I PDF

316. * I-Wen Feng, Jing Li, Jingyu Lin, Hongxing Jiang, and John M. Zavada, "Current injection emitters at 1.54 μm based on erbium doped GaN p-i-n structures**,"** Advances in Optical Materials - Semiconductor-based Optical materials (2012). Link

315. M. L. Nakarmi, B. Cai, J. Y. Lin, and H. X. Jiang, "Three-step growth method for high quality AlN epilayers," Phys. Status Solidi A 209, No. 1, 126 (2012).doi:10.1002/pssa.201127475 I PDF

314. J. Y. Lin, J. Day, J. Li, D. Lie, C. Bradford, and H. X. Jiang, "High-resolution group III nitride microdisplays," SPIE Newsroom, Dec. issue (2011). I PDF
313. N. T. Woodward, N. Nepal, B. Mitchell, I. W. Feng, J. Li, H. X. Jiang, J. Y. Lin, J. M. Zavada, and V. Dierolf, "Enhanced magnetization in erbium doped GaN thin films due to strain induced electric fields," Appl. Phys. Lett. 99, 122506 (2011). doi:10.1063/1.3643041 I PDF
312. Q. Wang, R. Dahal, I.-W. Feng, J. Y. Lin, H. X. Jiang, and R. Hui, "Emission and absorption cross-sections of an Er:GaN waveguide prepared with metal organic chemical vapor deposition ," Appl. Phys. Lett. 99, 121106 (2011). doi:10.1063/1.3636418 I PDF
311. X. Wang, C. Timm, X. M. Wang, W. K. Chu, J. Y. Lin, H. X. Jiang and J. Z. Wu,"Metastable Giant Moments in Gd-Implanted GaN, Si, and Sapphire," Journal of Superconductivity and Novel Magnetism 24, 2123 (2011). doi:10.1007/s10948-011-1165-x I PDF
310. H.X. Jiang and J.Y. Lin, "Semiconductor lasers: Expanding into blue and green," Nature Photonics 5, 521 (2011). doi:10.1038/nphoton.2011.210 I PDF
309. * K. Aryal, I. W. Feng, B. N. Pantha, J. Li, J. Y. Lin and H. X. Jiang,"Thermoelectric Properties of Er-doped InGaN Alloys for High Temperature Applications," MRS Proceedings 1325, mrss11-1325-e07-08 (2011). doi:10.1063/1.3643041 I PDF
308. B.N. Pantha, H. Wang, N.Khan, J.Y. Lin, and H.X. Jiang, "Origin of background electron concentration in $In_xGa_{1-x}N$ alloys," Phys. Rev. B 84, 075327 (2011). doi:10.1103/PhysRevB.84.075327 I PDF
307. J. Li, R. Dahal, S. Majety, J.Y. Lin, and H.X. Jiang, "Hexagonal boron nitride epitaxial layers as neutron detector materials," Nuclear Inst. and Methods in Physics Research Section A 654, 417 (2011). doi:10.1016/j.nima.2011.07.040 I PDF
306. Jacob Day, J. Li, D.Y.C. Lie, Charles Bradford, J.Y. Lin, and H.X. Jiang, "III-Nitride full-scale high-resolution microdisplays," Appl. Phys. Lett. 99, 031116 (2011). doi:10.1063/1.3615679 I PDF
305. R. Dahal, J. Li, S. Majety, B.N. Pantha, X.K. Cao, J.Y. Lin, and H.X. Jiang, "Epitaxially grown semiconducting hexagonal boron nitride as a deep ultraviolet photonic material," Appl. Phys. Lett. 98, 211110 (2011). doi:10.1063/1.3593958 I PDF (also selected by Virtual Journal of Nanoscale Science & Technology under Graphene, Carbon Nanotubes, C60, and related studies).
304. A. Sedhain, J. Y. Lin, and H. X. Jiang "AlN: Properties and Applications," Chapter 2 in "*Handbook of Luminescent Semiconductor Materials*," edited by L. Bergman and L. McHale, published in September, 2011 by CRC Press, Taylor & Francis Group (ISBN: 1439834679).
303. B.N. Pantha, I.W. Feng, K. Aryal, J. Li, J.Y. Lin, and H.X. Jiang, "Erbium-Doped AlInGaN Alloys as High-Temperature Thermoelectric Materials," Appl. Phys. Express. 4, 051001(2011). doi:10.1143/APEX.4.051001 I PDF
302. I.W. Feng, X.K. Cao, J. Li, J.Y. Lin, H.X. Jiang, N. Sawaki, Y. Honda, T. Tanikawa, and J. M. Zavada, "Photonic properties of erbium doped InGaN alloys grown on Si (001) substrates," Appl. Phys. Lett. 98 081102 (2011). doi:10.1063/1.3556678 I PDF
301. R. Dahal, J.Y. Lin, H.X. Jiang and J.M. Zavada, "Near infrared photonic devices based on Er-doped GaN and InGaN," Optical Materials, 33, 1066 (2011). doi:10.1016/j.optmat.2010.10.002 I PDF
300. N. Woodwarda, V. Dierolfa, J.Y. Lin, H.X. Jiang and J.M. Zavada, "Optical and magneto-optical properties of erbium doped InGaN and GaN epilayers," Optical Materials, 33,1059 (2011). doi:10.1016/j.optmat.2010.07.007 I PDF
299. T. M. Al Tahtamouni, A. Sedhain, J. Y. Lin, and H. X. Jiang, "Beryllium Doped p-type GaN Grown by Metal-Organic Chemical Vapor Deposition," J. J. Phys. 3, 77, 2010. PDF
298. J. Li, J. Y. Lin, H. X. Jiang, and N. Sawaki, "III-Nitrides on Si Substrates," Chapter 3 in III-V Compound Semiconductors: Integration with Silicon-Based Microelectronics, edited by T. Li, M. Mastro and A. Dadgar, published by CRC Press (Boca Raton 2010). ISBN: 978-1-4398-1523-6.
297. Q. Wang, R. Hui, R. Dahal, J.Y. Lin and H.X. Jiang, "Carrier lifetime in erbium-doped GaN waveguide emitting in 1540 nm wavelength," Appl. Phys. Lett. 97, 241105 (2010). doi:10.1063/1.3527089 I PDF
296. R. Dahal, C. Ugolini, J.Y. Lin, H.X. Jiang and J.M. Zavada, "1.54 μm emitters based on erbium doped InGaN p-i-n junctions," Appl. Phys. Lett. 97, 141109, (2010). doi:10.1063/1.3499654 I PDF

295. R. Dahal, J. Y. Lin, H. X. Jiang, and J. Zavada "Er doped $In_xGa_{1-x}N$ for optical communications," Chapter 5 in Rare-earth doped III-Nitrides for Optoelectronic and Spintronic Applications, edited by K O'Donnell & V Dierolf, published by Canopus Academic Publishing Ltd and Springer SBM (2010). doi:10.1007/978-90-481-2877-8_5
294. R. Dahal, J. Li, K. Aryal, J. Y. Lin, and H. X. Jiang, "InGaN/GaN multiple quantum well concentrator solar cells," Appl. Phys. Lett. 97, 073115 (2010). doi:10.1063/1.3481424 I PDF
293. B. N. Pantha, J. Li, J. Y. Lin, and H. X. Jiang, "Evolution of phase separation in In-rich InGaN alloys," Appl. Phys. Lett. 96, 232105 (2010). doi:10.1063/1.3453563 I PDF
292. B. N. Pantha, A. Sedhain, J. Li, J. Y. Lin, and H. X. Jiang, "Probing the relationship between structural and optical properties of Si-doped AlN," Appl. Phys. Lett. 96, 131906 (2010). doi:10.1063/1.3374444 I PDF
291. A. Sedhain, J. Li, J. Y. Lin, and H. X. Jiang, "Nature of deep center emissions in GaN," Appl. Phys. Lett. 96, 151902 (2010). doi:10.1063/1.3389497 I PDF
290. I. W. Feng, J. Li, A. Sedhain, J. Y. Lin, H. X. Jiang, and J. Zavada, "Enhancing erbium emission by strain engineering in GaN heteroepitaxial layers," Appl. Phys. Lett. 96, 031908 (2010). doi:10.1063/1.3295705 I PDF
289. K. Aryal, B. N. Pantha, J. Li, J. Y. Lin, and H. X. Jiang, "Hydrogen generation by solar water splitting using p-InGaN photoelectrochemical cells," Appl. Phys. Lett. 96, 052110 (2010). doi:10.1063/1.3304786 I PDF
288. * B N. Pantha, J. Y. Lin, and H. X. Jiang, "III-nitride nanostructures for energy generation," Proc. SPIE 7608, 76081I (2010). ; invited. doi:10.1117/12.840726 I PDF
287. * B. N. Pantha, A. Sedhain, J. Li, J. Y. Lin, and H. X. Jiang, "Achieving p-$In_xGa_{1-x}N$ alloys with high In contents," Proc. SPIE 7602, 76020Z (2010). doi:10.1117/12.842313 I PDF
286. * R. Dahal, J. Y. Lin, H. X. Jiang, and J. M. Zavada, "1.54 μm emitter and optical amplifier based on Er doped InGaN/GaN," Proc. SPIE 7598, 759819 (2010). doi:10.1117/12.842325
285. A. BenMoussa, A. Soltani, U. Schühle, K. Haenen, Y.M. Chong, W.J. Zhang, R. Dahal, J.Y. Lin, H.X. Jiang, H.A. Barkad, B. BenMoussa, D. Bolsee, C. Hermans, U. Kroth, C. Laubis, V. Mortet, J.C. De Jaeger, B. Giordanengo, M. Richter, F. Scholze, and J.F. Hochedezm, "Recent developments of wide-bandgap semiconductor based UV sensors," Diamond & Related Materials, 18, 860 (2009). doi:10.1016/j.diamond.2008.11.013 I PDF
284. *B. Giordanengo, A. Ben Moussa, J.-F. Hochedez, A. Soltani, P. de Moor, K. Minoglou, P. Malinowski, J.-Y. Duboz, Y.M. Chong, Y.S. Zou, W.J. Zhang, S.T. Lee, R. Dahal, J. Li, J.Y. Lin and and H.X. Jiang, "Recent Rob developments on wide bandgap based uv sensors," EAS Publications Series, 37, 199 (2009). [Astrophysics Detector Workshop 2008] doi:10.1051/eas/0937025 I PDF
283. A. Sedhain, L. Du, J. H. Edgar, J. Y. Lin, and H. X. Jiang, "The origin of 2.78 eV emission and yellow coloration in bulk AlN substrates," Appl. Phys. Lett. 95, 262104 (2009). doi:10.1063/1.3276567 I PDF
282. B. N. Pantha, A. Sedhain, J. Li, J. Y. Lin, and H. X. Jiang, "Electrical and optical properties of p-type InGaN," Appl. Phys. Lett. 95, 261904 (2009). doi:10.1063/1.3279149 I PDF
281. R. Dahal, C. Ugolini, J. Y. Lin, H. X. Jiang, and J. M. Zavada, "Erbium-doped GaN optical amplifiers operating at 1.54 μm," Appl. Phys. Lett. 95, 111109 (2009). doi:10.1063/1.3224203 I PDF
280. A. Sedhain, J. Li, J. Y. Lin, and H. X. Jiang, "Probing exciton-phonon interaction in AlN epilayers by photoluminescence," Appl. Phys. Lett. 95, 061106 (2009). doi:10.1063/1.3206672 I PDF
279. S. Nikishin, B. Borisov, M. Pandikunta, R. Dahal, J. Y. Lin, H. X. Jiang, H. Harris, and M. Holtz, "High quality AlN for deep UV photodetectors," Appl. Phys. Lett. 95, 054101 (2009). doi:10.1063/1.3200229 I PDF
278. A. Sedhain, C. Ugolini, J. Y. Lin, H. X. Jiang, and J. M. Zavada, "Photoluminescence properties of erbium doped InGaN epilayers," Appl. Phys. Lett. 95, 041113 (2009). doi:10.1063/1.3193532 I PDF
277. N. Nepal, J. M. Zavada, R. Dahal, C. Ugolini, A. Sedhain, J. Y. Lin, and H. X. Jiang, "Optical enhancement of room temperature ferromagnetism in Er-doped GaN epilayers," Appl. Phys. Lett. 95, 022510 (2009). doi:10.1063/1.3176972 I PDF

276. X. H. Ji, Q. Y. Zhang, S. P. Lau, H. X. Jiang, and J. Y. Lin, "Temperature-dependent photoluminescence and electron field emission properties of AlN nanotip arrays," Appl. Phys. Lett. 94, 173106 (2009). doi:10.1063/1.3126055 I PDF
275. N. Nepal, J. M. Zavada, D. S. Lee, A. J. Steckl, A. Sedhain, J. Y. Lin, and H. X. Jiang, "Deep ultraviolet photoluminescence of Tm-doped AlGaN alloys," Appl. Phys. Lett. 94, 111103 (2009). doi:10.1063/1.3097808 I PDF
274. M. L. Nakarmi, N. Nepal, J. Y. Lin, and H. X. Jiang, "Photoluminescence studies of impurity transitions in Mg-doped AlGaN alloys," Appl. Phys. Lett. 94, 091903 (2009). doi:10.1063/1.3094754 I PDF
273. R. Dahal, B. Pantha, J. Li, J. Y. Lin, and H. X. Jiang, "InGaN/GaN multiple quantum well solar cells with long operating wavelengths," Appl. Phys. Lett. 94, 063505 (2009). doi:10.1063/1.3081123 I PDF
272. B. N. Pantha, R. Dahal, J. Li, J. Y. Lin, H. X. Jiang and G. Pomrenke, "Thermoelectric Properties of $In_{0.3}Ga_{0.7}N$ Alloys", JEM (2009). doi:10.1007/s11664-009-0676-8 I PDF
271. Z. Y. Fan, J. Y. Lin and H. X. Jiang,"II-nitride micro-emitter arrays: development and applications," J. Phys. D: Appl. Phys. 41, 094001 (2008). doi:10.1088/0022-3727/41/9/094001 I PDF
270. B. N. Pantha, J. Li, J. Y. Lin, and H. X. Jiang, "Single phase $In_xGa_{1-x}N$ ($0.25 \leq x \leq 0.63$) alloys synthesized by metal organic chemical vapor deposition," Appl. Phys. Lett. 93, 182107 (2008). doi:10.1063/1.3006432 I PDF
269. J. Li, J. Y. Lin, and H. X. Jiang, "Direct hydrogen gas generation by using InGaN epilayers as working electrodes," Appl. Phys. Lett. 93, 162107 (2008). doi:10.1063/1.3006332 I PDF
268. J. Liu, J. Li, A. Sedhain, J. Y. Lin, and H. X. Jiang, "Structure and Photoluminescence Study of TiO_2 Nanoneedle Texture along Vertically Aligned Carbon Nanofiber Arrays", J. Phys. Chem. C, 112, 17127 (2008). doi:10.1021/jp8060653 I PDF
267. A. Sedhain, T. M. Al Tahtamouni, J. Li, J. Y. Lin, and H. X. Jiang, "Beryllium acceptor binding energy in AlN," Appl. Phys. Lett. 93, 141104 (2008). doi:10.1063/1.2996977 I PDF
266. A. Sedhain, N. Nepal, M. L. Nakarmi, T. M. Al tahtamouni, J. Y. Lin, H. X. Jiang, Z. Gu, and J. H. Edgar, "Photoluminescence properties of AlN homoepilayers with different orientations," Appl. Phys. Lett. 93, 041905 (2008). doi:10.1063/1.2965613 I PDF
265. R. Dahal, C. Ugolini, J. Y. Lin, H. X. Jiang, and J. M. Zavada, "Current-injected 1.54 μm light emitting diodes based on erbium-doped GaN," Appl. Phys. Lett. 93, 033502 (2008). doi:10.1063/1.2955834 I PDF
264. N. Khan, A. Sedhain, J. Li, J. Y. Lin, and H. X. Jiang, "High mobility InN epilayers grown on AlN epilayer templates," Appl. Phys. Lett. 92, 172101 (2008). doi:10.1063/1.2917473 I PDF
263. T. Al Tahtamouni, A. Sedhain, J. Y. Lin, H. X. Jiang, "Growth and optical properties of a-plane AlN and Al rich $AlN/Al_xGa_{1-x}N$ quantum wells grown on r-plane sapphire substrates", phys. stat. sol. (c), 5, 1568 (2008). doi:10.1002/pssc.200778491
262. R. Dahal, J. Li, Z. Y. Fan, M. L. Nakarmi, T. M. Al Tahtamouni, J. Y. Lin, H. X. Jiang, "AlN MSM and Schottky photodetectors", phys. stat. sol. (c), 5, 2148 (2008). doi:10.1002/pssc.200778489 I PDF
261. T. M. Al tahtamouni, A. Sedhain, J. Y. Lin, and H. X. Jiang, "Si-doped high Al-content AlGaN epilayers with improved quality and conductivity using indium as a surfactant," Appl. Phys. Lett. 92, 092105 (2008). doi:10.1063/1.2890416 I PDF
260. A. Sedhain, J. Y. Lin, and H. X. Jiang, "Valence band structure of AlN probed by photoluminescence," Appl. Phys. Lett. 92, 041114 (2008). doi:10.1063/1.2840176 I PDF
259. B. N. Pantha, R. Dahal, J. Li, J. Y. Lin, H. X. Jiang, and G. Pomrenke, "Thermoelectric properties of $In_xGa_{1-x}N$ alloys," Appl. Phys. Lett. 92, 042112 (2008). PDF
258. A. BenMoussa, J. F. Hochedez, R. Dahal, J. Li, J. Y. Lin, H. X. Jiang, A. Soltani, J.-C. De Jaeger, U. Kroth, and M. Richter, "Characterization of AlN metal-semiconductor-metal diodes in the spectral range of 44–360 nm: Photoemission assessments," Appl. Phys. Lett. 92, 022108 (2008). doi:10.1063/1.2834701 I PDF
257. K. Makarova, M. Stachowicz, V. Glukhanyuk, A. Kozanecki, C. Ugolini, J.Y. Lin, H.X. Jiang , J. Zavada, "Spectroscopic studies of Er-centers in MOCVD grown GaN layers highly doped with Er," Materials Science and Engineering B 146, 193 (2008). doi:10.1016/j.mseb.2007.07.032 I PDF

256. R. Dahal, T. M. Al Tahtamouni, J. Y. Lin, and H. X. Jiang , "AlN avalanche photodetectors," Appl. Phys. Lett. 91, 243503 (2007). doi:10.1063/1.2823588 I PDF
255. X. A. Cao, H. Piao, J. Li, J. Y. Lin, and H. X. Jiang, "Surface chemical and electronic properties of plasma-treated n-type $Al_{0.5}Ga_{0.5}N$," Phys. Stat. Sol. (a) 204, 3410 (2007). doi:10.1002/pssa.200723119
254. B. N. Pantha, N. Nepal, T. M. Al Tahtamouni, M. L. Nakarmi, J. Li, J. Y. Lin, and H. X. Jiang, "Correlation between biaxial stress and free exciton transition in AlN epilayers," Appl. Phys. Lett. 91, 121117 (2007). doi:10.1063/1.2789182 I PDF
253. Fei Wang, Shu-Shen Li, Jian-Bai Xia, H. X. Jiang, J. Y. Lin, Jingbo Li, and Su-Huai Wei, "Effects of the wave function localization in AlInGaN quaternary alloys," Appl. Phys. Lett. 91, 061125 (2007). doi:10.1063/1.2769958 I PDF
252. J. M. Zavada, N. Nepal, C. Ugolini, J. Y. Lin, and H. X. Jiang et al, "Optical and magnetic behavior of erbium-doped GaN epilayers grown by metal-organic chemical vapor deposition," Appl. Phys. Lett. 91, 054106 (2007). doi:10.1063/1.2767992 I PDF
251. N. Khan, N. Nepal, A. Sedhain, J. Y. Lin, and H. X. Jiang, "Mg acceptor level in InN epilayers probed by photoluminescence," Appl. Phys. Lett. 91, 012101 (2007). doi:10.1063/1.2753537 I PDF
250. R. Dahal, T. M. Al Tahtamouni, Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "Hybrid AlN–SiC deep ultraviolet Schottky barrier photodetectors," Appl. Phys. Lett. 90, 263505 (2007). doi:10.1063/1.2752126 I PDF
249. B. N. Pantha, R. Dahal, M. L. Nakarmi, N. Nepal, J. Li, J. Y. Lin, H. X. Jiang, Q. S. Paduano, and David Weyburne, "Correlation between optoelectronic and structural properties and epilayer thickness of AlN," Appl. Phys. Lett. 90, 241101 (2007). doi:10.1063/1.2747662 I PDF
248. T. M. Al Tahtamouni, A. Sedhain, J. Y. Lin, and H. X. Jiang, "Growth and photoluminescence studies of a-plane $AlN/Al_xGa_{1-x}N$ quantum wells," Appl. Phys. Lett. 90, 221105 (2007). doi:10.1063/1.2743956 I PDF
247. X. H. Ji, S. P. Lau, S. F. Yu, H. Y. Yang, T. S. Herng, A. Sedhain, J. Y. Lin, H. X. Jiang, K. S. Teng, and J. S. Chen, "Ultraviolet photoluminescence from ferromagnetic Fe-doped AlN nanorods," Appl. Phys. Lett. 90, 193118 (2007). doi:10.1063/1.2738370 I PDF
246. * Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "Achieving conductive high Al-content AlGaN alloys for deep UV photonics," Proc. SPIE 6479, 64791I (2007). *Invited*, doi:10.1117/12.715046
245. C. Ugolini, N. Nepal, J. Y. Lin, H. X. Jiang, and J. M. Zavada, "Excitation dynamics of the 1.54 μm emission in Er doped GaN synthesized by metal organic chemical vapor deposition,"Appl. Phys. Lett. 90, 051110(2007). doi:10.1063/1.2450641 I PDF
244. H. X. Jiang and J. Y. Lin, "III-Nitride Micro-Cavity Light-Emitters," – in "Wide Bandgap Light-Emitting Materials and Devices," edited by G.F. Neumark, I. Kuskovsky, and H. X. Jiang, published by Wiley –VCH Verlag GmbH, 2007.
243. J. Li, Z. Y. Fan, R. Dahal, M. L Nakarmi, J. Y. Lin, and H. X. Jiang, "200 nm deep ultraviolet photodetectors based on AlN," Appl. Phys. Lett. 89, 213510 (2006). doi:10.1063/1.2397021 I PDF
242. N. Nepal, M. L. Nakarmi, H. U. Jang, J. Y. Lin, and H. X. Jiang, "Growth and photoluminescence studies of Zn-doped AlN epilayers,"Appl. Phys. Lett. 89, 192111 (2006). doi I PDF
241. M. L. Nakarmi, N. Nepal, C. Ugolini, T. M. Al Tahtamouni, J. Y. Lin,and H. X. Jiang,"Correlation between optical and electrical properties of Mg-doped AlN epilayers," Appl. Phys. Lett. 89, 152120 (2006). doi:10.1063/1.2362582 I PDF
240. Z. M. Zavada, N.Nepal, J. Y. Lin, H. X. Jiang,E. Brown, U. Hommerich, J. Hite, G. T. Thaler, C. R. Abernathy, S. J. Pearton,and R. Gwilliam, "Ultraviolet photoluminescence from Gd-implanted AlN epilayers," Appl. Phys. Lett. 89, 152107 (2006). doi:10.1063/1.2357552 I PDF
239. N. Khan and J. Li, "Effects of compressive strain on optical properties of $In_xGa_{1-x}N$/GaN quantum wells," Appl. Phys. Lett. 89, 151916 (2006). doi:10.1063/1.2362587 I PDF
238. C. Ugolini, N.Nepal, J. Y. Lin, H. X. Jiang, and J. M. Zavada "Erbium-doped GaN epilayers synthesized by metal-organic chemical vapor deposition," Appl. Phys. Lett. 89, 151903 (2006). doi:10.1063/1.2362587 I PDF
237. T. M. Al Tahtamouni, N. Nepal, J. Y. Lin, H. X. Jiang and W. W. Chow, "Growth and photoluminescence studies of Al-rich $AlN/Al_xGa_{1-x}N$ quantum wells," Appl. Phys. Lett.89, 131922 (2006). doi:10.1063/1.2358107 I PDF

236. N. Nepal, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Photoluminescence studies of impurity transitions in AlGaN alloys," Appl. Phys. Lett. 89, 092107 (2006). doi:10.1063/1.2337856 I PDF
235. N. Nepal, K. B. Nam, J. Li, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Higher lying conduction band in GaN and AlN probed by photoluminescence spectroscopy," Appl. Phys. Lett. 88, 261919 (2006).doi I PDF
234. X. A. Cao, H. Piao, S. F. LeBoeuf, J. Li, J. Y. Lin, and H. X. Jiang, "Effects of plasma treatment on the Ohmic characteristics of Ti/Al/Ti/Au contacts to n-AlGaN," Appl. Phys. Lett. 89, 082109 (2006). doi:10.1063/1.2338434 I PDF
233. J. K. Kim , E. F. Schubert , J. Cho , C. Sone , J. Y. Lin , H. X. Jiang , and J. M. Zavada, "GaN light-emitting triodes for high-efficiency hole injection," J. Electrochem. Soc.153, G734 (2006). doi:10.1117/12.647453 I PDF
232. T. N. Oder, P. Martin, J. Y. Lin, H. X. Jiang, J. R. Williams, and T. Isaacs-Smith, "Thermally stable Schottky contacts on n-type GaN using ZrB_2," Appl. Phys. Lett. 88, 183505 (2006).doi:10.1063/1.2199611 I PDF
231. J. Li, J. Y. Lin, and H. X. Jiang,"Growth of III-nitride photonic structures on large area silicon substrates," Appl. Phys. Lett. 88, 171909 (2006). doi:10.1063/1.2199492 I PDF
230. * Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "III-nitride deep ultraviolet micro- and nano-photonics," Proc. SPIE 6127, 61271C (2006), *invited*.
229. N. Nepal, J. Shakya, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang,"Deep ultraviolet photoluminescence studies of AlN photonic crystals," Appl. Phys. Lett. 88, 133113 (2006). doi:10.1063/1.2190452 I PDF
228. * N. Nepal, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Time-resolved photoluminescence studies of Mg-doped AlN epilayers," Proc. SPIE, 6118, 61180E (2006). doi:10.1117/12.51856, *invited*.
227. Z. Y. Fan, J. Li, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "AlGaN/GaN/AlN quantum-well field-effect transistors with highly resistive AlN epilayers," Appl. Phys. Lett. 88, 073513 (2006). doi:10.1063/1.2174847 I PDF
226. N. Nepal, J. Li, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang,"Exciton localization in AlGaN alloys," Appl. Phys. Lett. 88, 062103 (2006). doi:10.1063/1.2172728 I PDF
225. A. N. Westmeyer, S. mahajan, K. K. Bajaj, J. Y. Lin, H. X. Jiang, D. D. Koleske, and R. T. Senger, "Determination of energy-band offsets between GaN and AlN using excitonic luminescence transition in AlGaN alloys," J. Appl. Phys. 99, 013705 (2006). doi:10.1063/1.2158492 I PDF
224. * H. X. Jiang, C. Ugolini, J. Y. Lin, and J. Zavada, "III-nitride wide bandgap semiconductors for optical communications," IEEE Lasers and Electro-Optics Society (LEOS) Annual Meeting, Vols 1 and 2, 36 (2006) 2006, *invited*.
223. G.D. Chen, Y. Z. Zhu, G. J. Yan, J. S.Yuan, K. H. Kim, J. Y. Lin, and H. X. Jiang, "Time-resolved photoluminescence studies of indium-rich InGaN alloys," CHINESE PHYSICS LETTERS 22, 472 (2005). PDF
222. Hallbeck S, Caruso AN, Adenwalla S, Brand J, Byun DJ, Jiang HX, Lin JY, Losovyj YB, Lundstedt C, McIlroy DN, Pitts WK, Robertson BW, Dowben PA, "Comment on "Spectral identification of thin film coated and solid form semiconductor neutron detectors" by McGregor and Shultis," Nuclear Instruments & Methods in Physics Research Section A-Accelerators Spectrometers Detectors and Associated Equipment,536, 228 (2005). doi:10.1016/j.nima.2004.07.210 I PDF
221. N. Nepal, J. Li, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Temperature and Compositional Dependence of the Energy Bandgap of AlGaN Alloys," Appl. Phys. Lett. 87, 242104 (2005). doi:10.1063/1.2142333 I PDF
220. *N. Nepal, K. B. Nam, J. Li, J. Y. Lin, and H. X. Jiang, "Carrier dynamics in AlN and GaN epilayers at the elevated temperatures," Proc. SPIE, 5725, 119 (2005). doi:10.1117/12.590917
219. R. Hui, Y. Wan, J. Li, S.X. Jin, J. Y. Lin, and H. X. Jiang, "III-nitride-based planar lightwave circuits for long wavelength optical communications," IEEE J. Quantum Electronics 41, 100 (2005). doi:10.1109/JQE.2004.838169 I PDF
218. M. L. Nakarmi, N. Nepal, J. Y. Lin, and H. X. Jiang, "Unintentionally doped n-type $Al_{0.67}Ga_{0.33}N$ epilayers" Appl. Phys. Lett. 86, 261902 (2005). doi:10.1063/1.1954875 I PDF

217. K. B. Nam, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang,"Deep impurity transitions involving cation vacancies and complexes in AlGaN alloys" Appl. Phys. Lett. 86, 222108 (2005). doi:10.1063/1.1943489 I PDF
216. M. Khizar, Z. Y. Fan, K. H. Kim, J. Y. Lin, and H. X. Jiang, "Nitride deep-ultraviolet light-emitting diodes with microlens array" Appl. Phys. Lett. 86, 173504 (2005). doi:10.1063/1.1914960 I PDF
215. J. Shakya, K. Knabe, K. H. Kim, J. Li, J. Y. Lin, and H. X. Jiang , "Polarization of III-nitride blue and ultraviolet light-emitting diodes" Appl. Phys. Lett. 86, 091107 (2005). doi:10.1063/1.1875751 I PDF
214. M. L. Nakarmi, K. H. Kim, M. Khizar, Z. Y. Fan, J. Y. Lin and H. X. Jiang, "Electrical and optical properties of Mg-doped $Al_{0.7}Ga_{0.3}N$ alloys"Appl. Phys. Lett. 86, 092108 (2005). doi:10.1063/1.1879098 I PDF
213. * J. Y. Lin, H. X. Jiang, and J. Zavada, "Nitride Photonic Crystals," Eighth International Symposium on Contemporary Photonics Technology, Tokyo, Japan (January 2005), *invited*.
212. * J. Y. Lin, and H. X. Jiang, "III-Nitride Ultraviolet Micro- and Nano-Photonics," 2005 Conference on Lasers & Electro-Optics (CLEO), 2, 1441 (2005); invited.
211. * J.M. Zavada, Ei Ei Nyein, U. Hommerich, J., Li, J. Y. Lin, H. X. Jiang, P. Chow, and J. W. Dong, "Visible and IR emission from Er-doped III-N LEDs," MRS Proceedings, 866, 59 (2005).
210. B. Guo, Z. R. Qiu, J. Y. Lin, H. X. Jiang, and K. S. Wong, "Deep bandtail states picosecond intensity-dependent carrier dynamics of GaN epilayer under high excitation," Appl. Phys. B – Laser and Optics 80, 521 (2005).
209. B. Liu, J.H. Edgar, B. Raghothamachar, M. Dudley, J.Y. Lin, and H.X. Jiang, A. Sarua, M. Kuball, "Free nucleation of aluminum nitride single crystals in HPBN crucible by sublimation," Materials Science and Engineering B - Solid State Materials for Advanced Technology 117, 99 (2005).
208. K. H. Kim, Z. Y. Fan, M. Khizar, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "AlGaN-based ultraviolet light-emitting diodes grown on AlN epilayers," Appl. Phys. Lett. 85, 4777 (2004). doi:10.1063/1.1819506 I PDF
207. K. Zhu, M. L. Nakarmi, K. H. Kim, J. Y. Lin, and H. X. Jiang, "Silicon Doping Dependence of Highly Conductive n-type $Al_{0.7}Ga_{0.3}N$," Appl. Phys. Lett. 85, 4669 (2004). doi:10.1063/1.1825055 I PDF
206. * J. Shakya, K. H. Kim, T. N. Oder, J. Y. Lin, and H. X. Jiang, "III-nitride blue and UV photonic-crystal light-emitting diodes," Proc. of SPIE Vol. 553-241(2004). doi:10.1117/12.565632 I PDF
205. * M. L. Nakarmi, K. H. Kim, K. Zhu, J. Y. Lin and H. X. Jiang, "Mg doped Al-rich AlGaN alloys for UV emitters," Proc. SPIE, 5530, 54 (2004). doi:10.1117/12.566192 I PDF
204. * K.B. Nam, M. L. Nakarmi, J. Li, J. Y. Lin and H. X. Jiang, "Time-resolved photoluminescence studies of Si & Mg-doped AlN epilayers," Proc. SPIE (SPIE, Belingham, WA), 5352, 188 (2004).
203. L. Chen, B. J. Skromme, R. F. Dalmau, R. Schlesser, Z. Sitar,C. Chen, W. Sun, J. Yang, M. A. Khan, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang,"Band-edge exciton states in AlN single crystals and epitaxial layers," Appl. Phys. Lett. 85, 4334 (2004).doi:10.1063/1.1818733 I PDF
202. M. L. Nakarmi, K. H. Kim, K. Zhu, J. Y. Lin, and H. X. Jiang, "Transport properties of highly conductive n-type Al-rich $Al_xGa_{1-x}N$ ($x \geq 0.7$)," Appl. Phys. Lett. 85, 3769 (2004). doi:10.1063/1.1809272 I PDF
201. K. B. Nam, J. Li, J. Y. Lin, and H. X. Jiang, "Optical properties of AlN and GaN in elevated temperatures," Appl. Phys. Lett. 85, 3489 (2004). doi:10.1063/1.1806545 I PDF
200. N. Nepal, M. L. Nakarmi, K. B. Nam, J. Y. Lin, and H. X. Jiang, "Acceptor-bound exciton transition in Mg-doped AlN epilayer," Appl. Phys. Lett. 85, 2271 (2004). doi:10.1063/1.1796521 I PDF
199. J. Shakya, J. Y. Lin and H. X. Jiang, "Time-Resolved Electroluminescence Studies of III-Nitride Ultraviolet Photonic-Crystal Light-Emitting Diodes," Appl. Phys. Lett. 85, 2104 (2004). doi:10.1063/1.1786372 I PDF
198. D. Zhang, J. H. Edgar, B. Liu, H. E. Huey, H. X. Jiang, J. Y. Lin, M. Kuball, F. Mogal, J. Chaudhuri, and Z. Rek, "Bulk AlN growth by direct heating of the source using microwave," J. Crystal Growth, 262 89 (2004).
197. J. Shakya, K. H. Kim, J. Y. Lin, and H. X. Jiang, "Enhanced Light Extraction in III-Nitride Ultraviolet Photonic Crystal Light-Emitting Diodes," Appl. Phys. Lett. 85, 142 (2004). doi:10.1063/1.1768297 I PDF

196. K. B. Nam, J. Li, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Unique optical properties of AlGaN alloys and related ultraviolet emitters," Appl. Phys. Lett. 84, 5264 (2004). doi:10.1063/1.1765208 I PDF
195. Shih-Wei Feng, Tsung-Yi Tang, Yen-Cheng Lu, Shi-Jiun Liu, En-Chiang Lin, C. C. Yang, Kung-Jen Ma, Ching-Hsing Shen, L. C. Chen, K. H. Kim, J. Y. Lin, and H. X. Jiang, "Cluster size and composition variations in yellow and red light-emitting InGaN thin films upon thermal annealing," J. Appl. Phys. 95, 5388 (2004).
194. W. Liang, K.T. Tsen, D.K. Ferry, K.H. Kim, J.Y. Lin, and H.X. Jiang, "Field-induced non-equilibrium electron transport in an In0.4Ga0.6N epilayer grown on GaN studied by subpicosecond Raman spectroscopy," Semiconductor Science and Technology, 19, S427 (2004).
193. * Y. Gong, Y. Gu, Igor L. Kuskovsky, G.F. Neumark, J. Li, J.Y. Lin, H.X. Jiang, and I. Ferguson, "Non-Equilibrium Acceptor Concentration in GaN:Mg Grown by Metalorganic Chemical Vapor Deposition, MRS Proceedings, 798, 491 (2004).
192. * Z. Y. Fan, M.L. Nakarmi, J.Y. Lin, and H.X. Jiang, Delta-Doped AlGaN/GaN Heterostructure Field-Effect Transistors With Incorporation of AlN Epilayers, MRS Proceedings 798, 101 (2004).
191. * Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "Recent Advances in III-Nitride UV Materials and Devices", State-of-the-Art Program on Compound Semiconductors XL (SOTAPOCS XL) and Narrow Bandgap Optoelectronic Materials and Devices II, Proceedings Volume 2004-02.
190. J. Shakya, J. Y. Lin and H. X. Jiang, "Near Field Optical Study of AlGaN/GaN Quantum Well Waveguide," Appl. Phys. Lett. 84 1832 (2004). doi:10.1063/1.1675936 I PDF
189. C. H. Chen and Y. F. Chen, Z. H. Lan, L. C. Chen, and K. H. Chen, H. X. Jiang and J. Y. Lin, "Mechanism of enhanced luminescence in $In_xAl_yGa_{1-x-y}N$ quaternary epilayers," Appl. Phys. Lett. 84 1480 (2004). doi:10.1063/1.1650549 I PDF
188. Y. S. Park, K. H. Kim, J. J. Lee, H. S. Kim, T. W. Kang, H. X. Jiang, and J. Y. Lin, "X-ray diffraction analysis of the defect structure in $Al_xGa_{1-x}N$ films grown by metal organic chemical vapor deposition," J. of Mater. Science 39, 1853(2004). doi:10.1023/B:JMSC.0000016202.96505.51 I PDF
187. N. Nepal, K. B. Nam, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, J. M. Zavada, and R. G. Wilson, "Optical properties of the nitrogen vacancy in AlN epilayers," Appl. Phys. Lett.84, 1090 (2004). doi:10.1063/1.1648137 I PDF
186. J. M. Zavada, S. X. Jin, N. Nepal, J. Y. Lin, H. X. Jiang, P. Chow and B. Hertog, "Electroluminescent properties of erbium-doped III-N light emitting diodes," Appl. Phys. Lett. 84, 1061 (2004). doi:10.1063/1.1647271 I PDF
185. T. N. Oder, K. H. Kim, J. Y. Lin and H. X. Jiang, "III-Nitride Blue and Ultraviolet Photonic Crystal Light Emitting Diodes," Appl. Phys. Lett. 84, 466 (2004). doi:10.1063/1.1644050 I PDF
184. * W. Liang, K.T. Tsen, D.K. Ferry, K.H. Kim, J.Y. Lin, and H.X. Jiang, "Subpicosecond Raman studies of non-equilibrium electron transport in an In0.4Ga0.6N epilayer grown on GaN," Proc. SPIE (SPIE, Belingham, WA), 5352, 404 (2004).
183. H. X. Jiang and J. Y. Lin, "Carrier Dynamics Probed by Time-Resolved Photoluminescence,"– in "*Ultrafast Dynamics Processes in Semiconductors,*" Book Volume 92 – Topics in Applied Physics, edited by K. T. Tsen, published by Springer-Verlag Berlin, (Berlin Heidelberger, 2004).
182. H. X. Jiang & J. Y. Lin, "AlN Epitaxial Layers for UV Photonics" – Chapter 7 in *Optoelectronic Devices: III-Nitride*, edited by M. Razeghi and M. Heini, published by Elsevier Ltd. (Amsterdam, 2004).
181. * Shih-Wei Feng, Yung-Chen Cheng, En-Chiang Lin, Hsiang-Chen Wang, CC Yang, Kung-Jen Ma, Ching-Hsing Shen, LC Chen, KH Kim, JY Lin, and HX Jiang, "Thermal annealing effects on the optical properties of high-indium InGaN epi-layers," physica status solidi (c), **0**, 2654 (2003).
180. *J. Shakya, K. H. Kim, J. Li, J. Y. Lin, and H. X. Jiang, "III-Nitride Photonic Crystals for Blue and UV Emitters," Symposium Proceedings of Material Research Society Vol. 798, Y4.6.1 (2003).
179. H. X. Jiang, J. Y. Lin, R. Hui, and J. Zavada, "III-nitrides show promise for telecomm wavelengths," Laser Focus World, Nov. issue (2003). PDF
178. J. Li, K. B. Nam, M. L. Nakarmi, J. Y. Lin, H. X. Jiang, Pierre Carrier, and Su-Huai Wei, "Band structure and fundamental optical transitions in wurtzite AlN," Appl. Phys. Lett. 83, 5163 (2003). PDF

177. J. M. Zavada, J. Y. Lin, H. X. Jiang, P. Chow, B. Hertog, U. Hömmerich, Ei Ei Nyein, and H. A. Jenkinson, “Synthesis and optical characterization of erbium-doped III-N double heterostructures,” Mater. Sci. Eng. B, Elsevier, B105, 118 (2003).
176. H. D. Sun, R. Macaluso, S. Calvez, M. D. Dawson, F. Robert, A. C. Bryce,J. H. Marsh, P. Gilet, L. Grenouillet, A. Million,K. B. Nam, J. Y. Lin, and H. X. Jiang,"Quantum well intermixing in GaInNAs/GaAs structures," J. Appl. Phys. 94, 7581 (2003). PDF
175. Shih-Wei Feng, En-Chiang Lin, Tsung-Yi Tang, Yung-Chen Cheng, Hsiang-Chen Wang, C. C. Yang, Kung-Jen Ma, Ching-Hsing Shen, L. C. Chen, K. H. Kim, J. Y. Lin, and H. X. Jiang, "Thermal annealing effects on an InGaN film with an average indium mole fraction of 0.31,"Appl. Phys. Lett. 83, 3906 (2003). PDF
174. R. M. Frazier, G. T. Thaler, C. R. Abernathy, S. J. Pearton, M. L. Nakarmi, K. B. Nam, J. Y. Lin, H. X. Jiang,J. Kelly, R. Rairigh, and A. F. Hebard, "Transition metal ion implantation into AlGaN,"J. Appl. Phys. 94, 4956 (2003). PDF
173. K. B. Nam, M. L. Nakarmi, J. Li, J. Y. Lin, and H. X. Jiang, "Photoluminescence studies of Si-doped AlN epilayers,"Appl. Phys. Lett. 83, 2787 (2003). PDF
172. R. Hui, Y. Wan, J. Li, S. X. Jin, J. Y. Lin, and H. X. Jiang," Birefringence of GaN/AlGaN optical waveguides,"Appl. Phys. Lett. 83, 1698 (2003). PDF
171. T. N. Oder, J. Shakya, J. Y. Lin, and H. X. Jiang, "III-nitride photonic crystals," Appl. Phys. Lett. 83, 1231 (2003). PDF
170. K. B. Nam, M. L. Nakarmi, J. Li, J. Y. Lin, and H. X. Jiang, "Mg acceptor level in AlN probed by deep ultraviolet photoluminescence," Appl. Phys. Lett. 83, 878 (2003). PDF
169. R. M. Frazier, J. Stapleton, G. T. Thaler, C. R. Abernathy, S. J. Pearton, R. Rairigh, J. Kelly, A. F. Hebard, M. L. Nakarmi, K. B. Nam, J. Y. Lin, H. X. Jiang, J. M. Zavada and R. G. Wilson, "Properties of Co-, Cr- or Mn-implanted AlN," J. Appl. Phys. 94, 1592 (2003). PDF
168. J. M. Zavada, R. G. Wilson, U. Hommerich, M. Thaik, J. T. Seo, C. J. Ellis, J. Y. Lin, and H. X. Jiang, “Compositional changes in Erbium-implanted GaN films due to Annealing,” Journal of Electronic Materials, 32, 382 (2003).
167. B. Guo, K.S. Wong, Z.Z. Ye, H.X. Jiang, and J.Y. Lin, “Dynamics of below-band-gap carrier in highly excited GaN,” Chinese Physics Letters 20, 749 (2003).
166. K. H. Kim, J. Li, S. X. Jin, J. Y. Lin, and H. X. Jiang, "III-nitride ultraviolet light-emitting diodes with delta doping," Appl. Phys. Lett. 83, 566 (2003). PDF
165. Young Shin Park, Kun Ho Kim, Jeoung Ju Lee, Hyeon Soo Kim, Tae Won Kang, Hong Xing Jiang and Jing Yu Lin, "Defect Reduction in $Al_xGa_{1-x}N$ Films Grown by Metal Organic Chemical Vapor Deposition," Jpn. J. Appl. Phys. 42, 1231 (2003). PDF
164. *Z. Y. Fan, J. Li, J. Y. Lin, H. X. Jiang, Y. Liu, J. A. Bardwell, J. B. Webb, and H. Tang, AlGaN/GaN Metal-Oxide-Semiconductor Heterostructure Field-Effect Transistors (MOSHFETs) with the Delta-Doped Barrier Layer," Symposium Proceedings of Materials Research Society, 743, 567 (2003).
163. * K. B. Nam, J. Li, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Epitaxial growth and time-resolved photoluminescence studies of AlN epilayers," SPIE Proceedings, 4992, 202 (2003).
162. L. S. Yu, L. Jia, D. Qiao, S. S. Lau, J. Li, J. Y. Lin, and H. X. Jiang, "The origin of leaky characteristics of Schottky diode on p-GaN," IEEE Transaction on Electron Devices, 50, 292 (2003). PDF
161. M. L. Nakarmi, K. H. Kim, J. Li, J. Y. Lin and H. X. Jiang, "Enhanced P-type Conductions in GaN and AlGaN by Mg-Delta-Doping," App. Phys. Lett. 82, 3041 (2003).PDF
160. T. N. Oder, J. Shakya, J. Y. Lin and H. X. Jiang "Nitride Microlens Arrays for Blue and UV Wavelength Applications, Appl. Phys. Lett. 82, 3692 (2003). PDF
159. H. X. Jiang and J. Y. Lin, "Advances in III-Nitride Microstructures and Micro-Size Emitters," J. of the Korean Physical Society, 42, S757 (2003).
158. J. Y. Lin and H. X. Jiang, "Recent Advances in III-Nitride Ultraviolet Photonic Materials and Devices," J. of the Korean Physical Society, 42, S535 (2003).
157. C. H. Chen, D. R. Hang, W. H. Chen, Y. F. Chen, H. X. Jiang and J. Y. Lin, “Persistent Photoconductivity in $In_xAl_yGa_{1-x-y}N$ quaternary alloys,” Appl. Phys. Lett. 82, 1884 (2003).PDF

156. K.B. Nam, J. Li, M. L. Nakarmi, J. Y. Lin and H. X. Jiang, “Deep ultraviolet picosecond time-resolved photoluminescence studies of AlN epilayers,” Appl. Phys. Lett. 82, 1694 (2003).PDF
155. W. Liang, K. T. Tsen, D. K. Ferry, K. H. Kim, J. Y. Lin, and H. X. Jiang, “Studies of field-induced non-equilibrium electron transport in an InxGa1-xN (x»0.6) epilayer grown on GaN,” Appl. Phys. Lett. 82, 1413 (2003).PDF
154. Shih-Wei Feng, Yung-Chen Cheng, Yi-Yin Chung, C. C. Yang, Kung-Jeng Ma, Chih-Chiang Yan, Chen Hsu, J. Y. Lin, and H. X. Jiang, “Strong green luminescence in quaternary InAlGaN thin films,” Appl. Phys. Lett. 82, 1377 (2003).PDF
153. R. Hui, S. Taherion, Y. Wan, J. Li, S.X. Jin, J. Y. Lin, and H. X. Jiang, “GaN-based waveguide devices for long wavelength optical communications,” Appl. Phys. Lett. 82, 1326 (2003).PDF
152. * J. Y. Lin and H. X. Jiang, “III-Nitride Ultraviolet Photonic Materials – Epitaxial Growth, Optical and Electrical Properties, and Applications,” Proceedings of SPIE on Quantum Sensing, 4999, 287 (2003), *invited*.
151. H. X. Jiang & J. Y. Lin, “III-Nitride Quantum Devices – Microphotonics,” CRC Critical Reviews in Solid State and Materials Sciences, (P. Holloway, Editor), 28, 131 (2003), *invited*.
150. J. Li, T. N. Oder, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Optical and Electrical Properties of Mg-doped p-type AlGaN," Appl. Phys. Lett. 80, 1210 (2002).PDF
149. Z. Y. Fan, J. Li, J. Y. Lin, and H. X. Jiang,"Delta-doped AlGaN/GaN metal oxide semiconductor heterostructure field effect transistors with high breakdown voltages," Appl. Phys. Lett. 81, 4649 (2002). PDF
148. J. Li, K. B. Nam, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Band-edge Photoluminescence of AlN Epilayers," Appl. Phys. Lett. 81, 3365 (2002). PDF
147. K.B. Nam, J. Li, M. L. Nakarmi, J. Y. Lin and H. X. Jiang, "Growth and Optical Studies of Two-Dimensional Electron Gas of Al-rich AlGaN/GaN Heterostructures," Appl. Phys. Lett. 81, 1809 (2002). PDF
146. X. A. Cao, S. F. LoBoeuf, K. H. Kim, P. Sandvik, E. B. Stokes, A. Ebong, D. Walker, J. Kretchmer, J. Y. Lin, and H. X. Jiang, "Investigation of radiative tunneling in GaN/InGaN single quantum well light-emitting diodes," Solid-State Electronics, 46, 2291 (2002).PDF
145. K. B. Nam, J. Li, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Achieving highly conductive AlGaN alloys with high Al contents," Appl. Phys. Lett. 81, 1038 (2002). PDF
144. * T. N. Oder, J. Li, J. Y. Lin, and H. X. Jiang,"Exciton-polariton propagation in AlGaN/GaN quantum-well waveguides probed by time-resolved photoluminescence", Proceeding of SPIE 4643, 258 (2002).
143. * J. Li K. B. Nam, T. N. Oder, K. H. Kim, M. L. Nakarmi, J. Y. Lin, and H. X. Jiang, "Time-resolved photoluminescence studies of Al-rich AlGaN alloys",Proceeding of SPIE, 4643, 250 (2002).
142. H. X. Jiang, J. Y. Lin, and W. W. Chow “Time-Resolved Photoluminescence Studies of III-Nitrides,” Chapter 1 in "Optical Properties of III-Nitrides I" edited by M .O. Manasreh and H. X. Jiang, (Taylor & Francis Books, New York & London 2002).
141. H. X. Jiang and J. Y. Lin, “AlGaN and InAlGaN Alloys – Epitaxial Growth, Optical and Electrical Properties, and Applications,” in a special issue of Opto-Electronics Review, 10, 271 (2002), *invited*.
140. M. E. Aumer, S. F. LeBoeuf, B. F. Moody, S. M. Bedair,K. Nam, J. Y. Lin, and H. X. Jiang"Effects of tensile, compressive, and zero strain on localized states in AlInGaN/InGaN quantum-well structures", Appl. Phys. Lett. 80, 3099 (2002). PDF
139. G. Coli, K. K. Bajaj, J. Li, J. Y. Lin and H. X. Jiang,"Exciton Luminescence Linewidth in AlGaN Alloys with High Aluminum Concentrations", Appl. Phys. Lett. 80, 2907 (2002).PDF
138. H. X. Jiang, J. Y. Lin, and W. W. Chow “Time-Resolved Photoluminescence Studies of III-Nitrides,” Chapter 1 in *"Optical Properties of III-Nitrides I" edited by* M .O. Manasreh and H. X. Jiang, (Taylor & Francis Books, New York & London 2002).
137. C. H. Chen, Y. F. Chen, H. X. Jiang, and J. Y. Lin, ""Mechanism of photoluminescence in GaN/AlGaN quantum wells"," Appl. Phys. Lett. 79, 3806 (2001).PDF
136. J. Li, K. B. Nam, J. Y. Lin, and H. X. Jiang, "Optical and Electrical Properties of Al rich AlGaN Alloys," Appl. Phys. Lett. 79, 3245 (2001). PDF

135. T.N. Oder, J.Y. Lin and H.X. Jiang, "Light Propagation properties in AlGAN/GaN Quantum Well Waveguides," Appl. Phys. Lett. 79, 2511 (2001). PDF
134. D. R. Hang, C. H. Chen, Y. F. Chen, H. X. Jiang, and J. Y. Lin, "AlGaN/GaN band offset determined by deep level emission" J. Appl. Phys. 90, 1887 (2001). PDF
133. Dai Lun, Zhang Bei, Lin Jingyu, and Jiang Hongxing, "Properties of optical resonant modes in III-Nitride semiconductor micro-cone cavities," Chinese Phys. Lett. 18, 437 (2001).
132. D. R. Hang, C. T. Liang, C. F. Huang, Y. H. Chang, Y. F. Chen, H. X. Jiang, and J. Y. Lin, "Effective mass of 2DEG in GaN/AlGaN heterostructure," Appl. Phys. Lett. 79, 66 (2001). PDF
131. H. X. Jiang and J. Y. Lin, "Advances in III-Nitride Micro-Size Light Emitters," invited feature article for III-Vs Review, June/July 2001 issue.
130. H. X. Jiang and J. Y. Lin, "Microdisplays Based on III-Nitride Wide Band Gap Semiconductors," invited feature article for oe magazine (The Monthly Publication of SPIE-The internal Society for Optical Engineering), July 2001 issue.
129. T.N. Oder, J.Y. Lin and H.X. Jiang, "Fabrication and Optical Characterization of III-Nitride Sub-micron Waveguides," Appl. Phys. Lett. 79, 12 (2001). PDF
128. S. X. Jin, J. Shakya, J. Y. Lin, and H. X. Jiang, "Size Dependence of III-Nitride Microdisk Light Emitting Diode Characteristics," Appl. Phys. Lett. 78, 3532 (2001). PDF
127. L. Dai, B. Zhang, J. Y. Lin, and H. X. Jiang, "Comparison of Optical Transitions in InGaN Quantum Well Structures and Microdisks," J. Appl. Phys. 89, 4951 (2001). PDF
126. K. B. Nam, J. Li, K. H. Kim, J. Y. Lin, and H. X. Jiang, "Growth and Deep UV Picosecond Time-Resolved Photoluminescence Studies of GaN/AlN Multiple Quantum Wells," Appl. Phys. Lett. 78, 3690 (2001). PDF
125. H. X. Jiang, S. X. Jin, J. Li, J. Shakya, and J. Y. Lin, "III-Nitride Blue Microdisplays," Appl. Phys. Lett. 78, 1303 (2001) PDF
124. G. Coli, K. K. Bajaj, J. Li, J. Y. Lin, and H. X. Jiang, "Linewidths of Excitonic Luminescence Transitions in AlGaN Alloys," Appl. Phys. Lett. 78, 1829 (2001). PDF
123. * T.N. Oder, J. Li, J.Y. Lin and H.X. Jiang, "Fabrication and Characterization of $In_xAl_yGa_{1-x-y}N$ Ultraviolet Detectors," Symposium Proceedings of Materials Research Society, 2000.
122. * J. Li, K. B. Nam, K. H. Kim, T. N. Oder, H. J. Jun, J. Y. Lin, and H. X. Jiang, "Growth and Optoelectronic Properties of III-Nitride Quaternary Alloys," Proceedings of SPIE, 4280, 27 (2001).
121. * J. Li, K. C. Zeng, E. J. Shin, J. Y. Lin, and H. X. Jiang, "Optimizing GaN/AlGaN Multiple Quantum Well Structures by Time-Resolved Photoluminescence," Proceedings of SPIE 4280, 70 (2001).
120. C. J. Ellis, R. M. Mair, J. Li, J. Y. Lin, H. X. Jiang, J. M. Zavada, and R. G. Wilson, "Optical Properties of pr Implanted GaN Epilayers and AlGaN Alloys," Materials Science & Engineering B - Solid State Materials for Advanced Technology 81, 167 (2001).
119. J.M. Zavada, C. J. Ellis, J. Y. Lin, H. X. Jiang, J. T. Seo, U. Hommerich, M. Thaik, R. G. Wilson, P. A. Grudowski, and R. D. Dupuis, "Annealing behavior of luminescence from erbium-implanted GaN," Materials Science & Engineering B - Solid State Materials for Advanced Technology 81, 127 (2001).
118. * H. X. Jiang and J. Y. Lin, "Advances in III-Nitride Micro-Photonic Devices," IEEE/LEOS Annual Meeting Conf. Proc. 2, 758, (2001).
117. H. X. Jiang and J. Y. Lin, Book Review for "Properties of Advanced Semiconductor Materials: GaN, AlN, InN, BN, SiGe, by Michael E. Levinshtein, Serge L. Rumyantsev, and Michael S. Shur, Eds (John Wiley & Sons, New York, 2001), MRS Bulletin, Vol. 26, 728 (2001).
116. H. X. Jiang and J. Y. Lin, "Persistent photoconductivity in III-nitrides," Chapter 5 in "III-Nitride Semiconductors: Electrical, Structural and Defects Properties" edited by M. O. Manasreh, (Elsevier Science, 2000).
115. W. H. Sun, S. T. Wang, J. C. Zhang, K. M. Chen, G. G. Qin, Y. Z. Tong, Z. J. Yang, G. Y. Zhang, Y. M. Pu, Q. L. Zhang, J. Li, J. Y. Lin, and H. X. Jiang, "Formation and dissolution of microcrystalline graphite in carbon-implanted GaN," J. Appl. Phys. 88, 5662 (2000). PDF
114. S. X. Jin, J. Li, J. Y. Lin, and H. X. Jiang "InGaN/GaN Quantum Well Interconnected Microdisk Light Emitting Diodes," Appl. Phys. Lett. 77, 3236 (2000). PDF

113. J. Z. Li, J. Y. Lin, H. X. Jiang, and G. Sullivan, “Transient Characteristics of AlGaN/GaN Heterojunction Field Effect transistors,” Appl. Phys. Lett. 77, 4046 (11 Dec 2000) PDF
112. J. Li, K.B. Nam, K. Kim, J.Y. Lin, and H.X. Jiang. "Growth and optical properties of InAlGaN Quaternary Alloy." Applied Physics Lett. 78, 61(Jan 1 2001) issue PDF
111. M.E. Aumer, S.F. Leboeuf, S.M. Bedair, M. Smith, J.Y. Lin, and H.X. Jiang "Effects of tensil and compressive strain on the luminescence properties of AlInGaN/InGaN quantum well structures" Appl. Phys. Lett. 77, 821 (2000). PDF
110. Eun-joo Shin, J. Li, J. Y. Lin, and H. X. Jiang, “Barrier Width Dependence of Quantum Efficiencies of GaN/$Al_xGa_{1-x}N$ Multiple Quantum Wells,” Appl. Phys. Lett. 77, 1170 (2000). PDF
109. C.H. Wei, Z. Y. Xie, J.H. Edgar, K.C. Zeng, Y.Y. Lin, H.X. Jiang, J. Chaudhuri, C. Ignatiev, and D.N.Braski, "MOCVD Growth of BGaN on 6H-SiC (0001) Substrates," J. Electron. Mater.29, 452 (2000).
108. * H.S. Kim, R.A.Mair, J. Li, Y. Lin, H.X. Jiang, "Exciton Localization Dynamics in AlGaN Alloys," Proceeding of Society of Photo-Optical Instrumentation Engineers (SPIE), Vol 3940, 139 (2000).
107. *K.T. Tsen, C. Koch, Y. Chen, H.Morkoe, J. Li, J.Y. Lin, H.X. Jiang, "Electronic Raman Scattering From Mg-doped Wurtzite GaN," Symposium Proceedings of Materials Research Society, Vol. 595 W11.12.1 .
106. * J.Z. Li, J. Li, J.Y. Lin, and H.X. Jiang, "Correlation Between Sheet Carrier Density and Mobility Product and Persistent Photoconductivity in AlGaN/GaN Heterostructures, "Symposium Proceedings of Material Research Society Vol. 595 W11.12.1 PDF
105. T. N. Oder, J. Li, J. Y. Lin, and H. X. Jiang, “Photoresponsivity of ultraviolet detectors based on InAlGaN quaternary,” Appl. Phys. Lett. 77, 791 (2000).
104. K.C. Zeng, J.Z. Li, J. Li, J.Y. Lin, and H.X. Jiang, "Well-width dependence of the quantum efficiencies of GaN/$Al_xGa_{1-x}N$ multiple quantum wells" Appl. Phys. Lett. 76, 3040 (2000) PDF
103. K.T. Tsen, C. Koch, Y.Chen, H. Morkoc, J.Z. Li, J. Li, J.Y. Lin, and H.X. Jiang, " Observation of electronic Raman scattering from Mg-doped wurtzite GaN" Appl. Phys. Lett. 76, 2889 (2000) PDF
102. K.C. Zeng, J. Li, J.Y. Lin, and H.X. Jiang, "Optimizing Growth Conditions for GaN/AlGaN Multiple Quantum Well Structures," Appl. Phys. Lett. 76, 864 (2000) PDF
101. H.S. Kim, R.A. Mair, J. Li, J.Y. Lin and H.X. Jiang, "Time-Resolved Photoluminescence Studies of $Al_xGa_{1-x}N$ Alloys," Appl. Phys. Lett. 76, 1252 (2000) PDF
100. K.C. Zeng, J.Y. Lin, and H.X. Jiang, "Effects of Alloy Disorder on the Transport Properties of $Al_xGa_{1-x}N$ Epilayers Probed by Persistent Photoconductivity," Appl. Phys. Lett. 76, 1728 (2000). PDF
99. S.X. Jin, J. Li, J.Z. Li, J.Y. Lin and H.X. Jiang, "GaN Microdisk Light Emitting Diodes," Appl. Phys. Lett. 76, 631 (2000) PDF
98. D. Qiao, L.S. Yu, S.S. Lau, J. Redwing, J.Y. Lin, and H.X. Jiang, "Dependence of Ni/AlGaN Schottky Barrier Height on Al Mode Fraction," J. Appl. Phys. 87, 801 (2000) PDF
97. R.A. Mair, J.Y. Lin, H.X. Jiang, E.D. Jones, A.A. Allerman, and S.R. Kurtz, "Time-Resolved Photoluminescence Studies of $In_xGa_{1-x}As_{1-y}Ny$," Appl. Phys. Lett. 76, 188 (2000) PDF
96. D. Qiao, L. S. Yu, S. S. Lau, J. Y. Lin, H. X. Jiang and T. E. Haynes, “A study of the Au/Ni Ohmic contact on p-GaN,” J. Appl. Phys. 88, 4196 (2000).
95. Hyeon Soo Kim, Robin Mair, Jin Li, Jingyu Lin and Hongxing Jiang, “Optical Characterization of $Al_xGa_{1-x}N$ Alloys Grown by MOCVD,” J. Korean Physical Society, 37, 391, (2000).
94. * H.S. Kim, H.X. Jiang, J.Y. Lin, W.W. Chow, A. Botchkarev, and H. Morkoc, "Piezoelectric Effects on the Dynamics of Optical Transitions in GaN/AlGaN Multiple Quantum Wells," Proceeding of Society of Photo-Optical Instrumentation Engineers (SPIE), Vol 3624, 198 (1999).
93. J.Z. Li, H.X. Jiang, J.Y. Lin, J.F. Geisz, and Sarah R. Kurtz, "Persistent Photoconductivity in $Ga_{1-x}In_xNyAs_{1-y}$" Appl. Phys. Lett. 75, 1899 (1999) PDF
92. M.O Manasreh, J.M. Baronowsky, K. Pakula, H.X. Jiang, J.Y. Lin, "Localized Vibrational Modes of Carbon-Hydrogen Complexes in GaN," Appl. Phys. Lett. 75, 659 (1999). PDF
91. J.M. Zavada, R.A. Mair, C.J. Ellis, H.X. Jiang, J.Y. Lin, and R.G. Wilson, "Optical Transitions in Pr Ion-Implanted GaN," Appl. Phys. Lett. 75, 790 (1999). PDF
90. * H.X. Jiang and J.Y. Lin, "Optical properties of III-nitride microstructures," Proceeding of Society of Photo-Optical Instrumentation Engineers (SPIE), (1999), invited.

89. H.X. Jiang, J.Y. Lin , K.C. Zeng, and W. Yang, "Optical resonance modes in GaN pyramid Microcavities, Appl. Phys. Lett. 75, 763 (1999). PDF
88. K.C. Zeng, L. Dai, J.Y. Lin, and H.X. Jiang, "Optical resonance mode in InGaN/GaN multiple-quantum-well microring cavities," Appl. Phys. Lett. 75, 2563 (1999). PDF
87. L.S. Yu, D. Qiao, S. S. Lau, J. M. Redwig, J.Y. Lin , and H.X. Jiang, "Measurement of the Al mole fraction of bulk AlGaN and AlGaN/GaN Heterostructure by photoconductance spectra," J. Appl. Phys. (Sept. 1, 1999) PDF
86. K.C. Zeng, J. Y. Lin, H. X. Jiang, and W. Yang, "Optical Properties of High Quality Insulating GaN Epilayers," Appl. Phys. Lett. 74, 3821 (1999). PDF
85. K.C. Zeng, J. Y. Lin, H. X. Jiang, and W. Yang, "Optical Properties of GaN Pyramids," Appl. Phys. Lett. 74, 1227 (1999). PDF
84. H. X. Jiang and J. Y. Lin, "Mode Spacing Anomaly in InGaN Blue Lasers," Appl. Phys. Lett. 74, 1066 (1999). PDF
83. R. Mair, J. Li, S. K. Duan, J. Y. Lin, and H. X. Jiang, "Time-Resolved Photoluminescence of an Ionized Donor-Bound Exciton in GaN," Appl. Phys. Lett. 74, 513 (1999). PDF
82. *C. H. Wei, Z. Y. Xie, J. H. Edgar, K. C. Zeng, J. Y. Lin, H. X. Jiang, G. Jiji, J. Chaudhuri, and D. N. Braski, "Growth and Characterization of $B_xGa_{1-x}N$ on 6H-SiC (0001)," MRS Internet J. Nitride Semicond. Res. 4S1, G3.79 (1999).
81. *H.S. Kim, J. Y. Lin, H. X. Jiang, W. W. Chow, A. Botchkarev, and H. Morkoc "Piezoelectric effects in GaN/AlGaN Multiple Quantum Wells Probed By Picosecond Time-Resolved Photoluminescence," MRS Internet J. Nitride Semicond. Res. 4S1, G3.3 (1999).
80. *J.M. Zavada, M. Thaik, U. Hommerich, J. D. MacKenzie, C. R. Abernathy, F. Ren, H. Shen, J. Pamulapati, H. X. Jiang, J. Y. Lin, and R. G. Wilson, "Luminescence From Er-Doped GaN Thin Films," MRS Internet J. Nitride Semicond. Res. 4S1, G11.1 (1999), invited.
79. *H. Morkoc R. Cingolani, W. Lambrecht, B. Gil, H. X. Jiang, J. Lin, D. Pavlidis, and K.Shenai "Material Properties of GaN in the Context of Electron Devices," MRS Internet J. Nitride Semicond. Res. 4S1, G1.2 (1999), invited.
78. H. Morkoc R. Cingolani, W. Lambrecht, B. Gil, H. X. Jiang, J. Lin, and D. Pavlidis "Spontaneous Polarization and Piezoelectric Field in Nitride Semiconductor Heterostructures", J. of the Korean Physical Society, 34 S224-S233 (1999), invited.
77. H. X. Jiang and J. Y. Lin, "Persistent Photoconductivity in GaN," A3.6 in Gallium Nitride and Related Compounds, EMIS Datareview Series, Edited by J. Edgar, S. Strite, I. Akasaki, H. Amano, and C. Wetzel, (The Institute of Electrical Engineers, London, 1999).
76. H. X. Jiang and J. Y. Lin, "Time-Resolved Photoluminescence Studies of GaN," A3.5 in Gallium Nitride and Related Compounds, EMIS Datareview Series, Edited by J. Edgar, S. Strite, I. Akasaki, H. Amano, and C. Wetzel, (The Institute of Electrical Engineers, London, 1999).
75. * J. Z. Li, J. Li, J. Y. Lin, and H. X. Jiang, “Correlation Between Sheet Carrier Density and Mobility Product and Persistent Photoconductivity in AlGaN/GaN Heterostructures,” Material Research Society Symposium Proceedings, Vol. 595 W11.12.1, Fall (1999).
74. H.S. Kim, J. Y. Lin, H. X. Jiang, W. W. Chow, A. Botchkarev, and H. Morkoc, "Piezoelectric Effects on the Optical Properties of GaN/AlGaN Multiple Quantum Wells," Appl. Phys. Lett. 73, 3426 (1998). PDF
73. D.N. McIlroy, S.D. Hwang, K. Yang, N. Remmes, P.A. Dowben, A.A. Ahmad, N.J. Ianno, J. Z. Li, J. Y. Lin, and H. X. Jiang, "The Incorporation of Nickel and Phosphorus Dopants Unto Boron-Carbon Alloy Thin Films," Appl. Phys. A67, 335 (1998).
72. K.C. Zeng, R. Mair, J. Y. Lin, H. X. Jiang, W. W. Chow, A. Botchkarev, and H. Morkoc, Appl. Phys. Lett., "Plasma Heating in Highly Excited GaN/AlGaN Multiple Quantum Wells," Appl. Phys. Lett. 73, 2476 (1998). PDF
71. K.C. Zeng, J. Y. Lin, and H. X. Jiang, "Collective Effects of Interface Roughness and Alloy Disorder in InGaN/GaN Multiple Quantum Wells," Appl. Phys. Lett. 73, 1724 (1998). PDF
70. H. B. Yu, H. Htoon, A. Delozanne, C. K. Shih, P.A. Grudowski, R. D. Dupuis, K.C. Zeng, R. Mair, J. Y. Lin, and H. X. Jiang "Dynamics of localized excitons in InGaN/GaN quantum," J. Vac. Sci. & Tech. B16, 2215 (1998). PDF

69. J.Z. Li, J. Y. Lin, H. X. Jiang, and M. A. Khan, "Effects of Persistent Photoconductivity on the Characteristic Performance of an AlGaN/GaN Heterostructure Ultraviolet Detector," Appl. Phys. Lett. 72, 2868 (1998). PDF
68. R. Mair, K. C. Zeng, J. Y. Lin, H. X. Jiang, B. Zhang, L. Dai, W. Kim, A.Botchkarevand, H. Morkoc, and M. Asif Khan, "Optical Modes Within III-Nitride Multiple Quantum Well Microdisk Cavities," Appl. Phys. Lett. 72, 1530 (1998). PDF
67. *H.X. Jiang and J. Y. Lin, "Dynamics of Fundamental Optical transitions in GaN," Proceeding of Society of Photo-Optical Instrumentation Engineers (SPIE), Vol 3277, 108 (1998), invited.
66. * K.C. Zeng, M. Smith, J. Y. Lin, H. X. Jiang, H. Morkoc, and M. Asif Khan, "Optical Transitions and Dynamic Processes in III-Nitride Epilayers and Multiple Quantum Wells," IEEE International Symposium on Compound Semiconductors, edited by Mike Melloch and Mark Reed, p235, 1998 IEEE.
65. * R. Mair, K.C. Zeng, J. Y. Lin, H. X. Jiang, B. Zhang, L. Dai, H. Tang, W. Kim, A. Botchkarevand, H. Morkoc, and M. Asif Khan, "Photoluminescence Properties of GaN/AlGaN Multiple Quantum Well Micro-disks," Symposium Proceedings of Materials Research Society, Vol 482, 649 (1998).
64. * K.C. Zeng, M. Smith, J. Y. Lin, H. X. Jiang, H. Morkoc, and M. Asif Khan, "Well Thickness and Doping Effects, and Room Temperature Emission Mechanisms in InGaN/GaN and GaN/AlGaN Multiple Quantum Wells," Symposium Proceedings of Materials Research Society, Vol 482, 643 (1998).
63. R. Mair, K.C. Zeng, J. Y. Lin, H. X. Jiang, B. Zhang, L. Dai, H. Tang, W. Kim, A. Botchkarevand and H. Morkoc, "Optical Properties of GaN/AlGaN Multiple Quantum Well Micro-disks," Appl. Phys. Lett. 71, 2898 (1997). PDF
62. * J. Z. Li, J. Y. Lin, H. X. Jiang, A. Khan, Q. Chen, A. Salvador, A. Borchkarev, and H. Morkoc, "Persistent Photoconductivity in p-Type GaN Epilayers and n-type AlGaN/GaN Heterostructures," Symposium Proceedings of Materials Research Society, Fall, 1996, Vol. 449, 537(1997).
61. * M. Smith, J. Y. Lin, H. X. Jiang, A. Khan, Q. Chen, A. Salvador, A. Borchkarev, and H. Morkoc, "Optical Transitions and Recombination Lifetimes in GaN and InGaN Epilayers, and InGaN/GaN and GaN/AlGaN Multiple Quantum Wells," Symposium Proceedings of Materials Research Society, Vol 449, 829 (1997).
60. K.C. Zeng, J. Y. Lin, H. X. Jiang, A. Salvador, G. Popovici, H. Tang, W. Kim, and H. Morkoc, "Effects of Well Thickness and Si-Doping on the Optical Properties of GaN/AlGaN Multiple Quantum Wells," Appl. Phys. Lett. 71, 1368 (1997). PDF
59. K.C. Zeng, M. Smith, J. Y. Lin, H. X. Jiang, J. C. Robert, E. L. Piner, F. G. McIntosh, S. M. Bedair, and J. Zavada, "Optical Transitions in InGaN/AlGaN Single Quantum Wells," J. Vac. & Sci. Tech. B15, 1139 (1997). PDF
58. J. Z. Li, J. Y. Lin, H. X. Jiang, M. Asif Khan, and Q. Chen, "Two-Dimensional Electron Gas in AlGaN/GaN Heterostructure," J. Vac. & Sci. Tech. B15, 1117 (1997). PDF
57. J.Z. Li, J. Y. Lin, H. X. Jiang, M. Asif Khan, and Q. Chen, "Persistent Photo-conductivity and Two Dimensional Electron Gas in AlGaN/GaN Heterostructures," J. Appl. Phys. 82, 1227 (1997). PDF
56. M. Smith, J. Y. Lin, H. X. Jiang, and A. Khan, "Room Temperature Intrinsic Optical Transitions in GaN Epilayers: the Band-to-Band versus Excitonic Transition," Appl. Phys. Lett. 71, 635 (1997). PDF
55. M. Smith, J. Y. Lin, H. X. Jiang, A. Khan, Q. Chen, A. Salvador, A. Borchkarev, and H. Morkoc, "Exciton-Phonon Interactions in InGaN/GaN and GaN/AlGaN Multiple Quantum Wells," Appl. Phys. Lett. 70, 2882 (1997). PDF
54. R.J. Bandaranayake, J. Y. Lin, H. X. Jiang, and C. M. Sorensen, "Synthesis and Properties of $Cd_{1-x}Mn_xS$ Diluted Magnetic Semiconductor Ultrafine Particles," J. of Magnetism & Magnetic Materials, 169, 289 (1997).
53. C.J. Sun, M. Zubair Anwar, Q. Chen, J. W. Yang, M. Asif Khan, M. S. Shur, A. D. Bykhovski, Z. Liliental-Weber, C. Kisielowski, M. Smith, J. Y. Lin, and H. X. Jiang, "Quantum Shift of Band-Edge Stimulated Emission in InGaN-GaN Multiple Quantum Well Light-Emitting Diodes," Appl. Phys. Lett. 70, 2978 (1997). PDF

52. S.D. Hwang, K. Yang, P. A. Dowben, A. A. Ahmad, N. J. Ianno, J. Z. Li, J. Y. Lin, H. X. Jiang, and D. N. Mcllroy, "Fabrication of n-Type Nickel Doped B5C1+d Homojunction and Heterojunction Diodes," Appl. Phys. Lett. 70, 1028 (1997). PDF
51. H.X. Jiang, J. Y. Lin, M. Asif Khan, Q. Chen, and J. W. Yang, "Surface Emission of $In_xGa_{1-x}N$ Epilayers under Strong Optical Excitation," Appl. Phys. Lett. 70, 984 (1997). PDF
50. M. Smith, J. Y. Lin, H. X. Jiang, A. Salvador, A. Botchkarev, H. Kim, and H. Morkoc "Optical Transitions in $GaN/Al_xGa_{1-x}N$ Multiple Quantum Wells Grown by Molecular Beam Epitaxy," Appl. Phys. Lett. 69, 2453 (1996). PDF
49. M. Smith, G. D. Chen, J. Y. Lin, H. X. Jiang, M. Asif Khan, and Q. Chen, "Time-Resolved Photoluminescence Studies of InGaN Epilayers," Appl. Phys. Lett. 69, 2837 (1996). PDF
48. J.Z. Li, J. Y. Lin, H. X. Jiang, A. Salvador, A. Botchkarev, and H. Morkoc, "Nature of Mg Impurities in GaN," Appl. Phys. Lett. 69, 1474 (1996). PDF
47. M. Smith, J. Y. Lin, and H. X. Jiang, "Disorder and Persistent Photoconductivity in ZnxCd1-xSe Semiconductor Alloys," Phys. Rev. B54, 1471 (1996). PDF
46. M. Smith, G. D. Chen, J. Y. Lin, H. X. Jiang, M. Asif Khan, and C. J. Sun, "Free Excitonic Transitions in GaN Grown by Metal-Organic Chemical Vapor Deposition,," J. Appl. Phys. 79, 7001 (1996). PDF
45. G. D. Chen, M. Smith, J. Y. Lin, H. X. Jiang, S.-H. Wei, M. Asif Khan, and C. J. Sun, "Fundamental Optical Transitions in GaN," Appl. Phys. Lett. 68, 2784 (1996). PDF
44. G. D. Chen, J. Y. Lin, and H. X. Jiang, "Effects of Electron Mass Anisotropy on Hall Factors in 6H-SiC," Appl. Phys. Lett. 68, 1341 (1996). PDF
43. C. Johnson, J. Y. Lin, H. X. Jiang, M. Asif Khan, and C. J. Sun, "Metastability and Persistent Photoconductivity in Mg-Doped P-type GaN," Appl. Phys. Lett. 68, 1808 (1996). PDF
42. M. Smith, G. D. Chen, J. Y. Lin, H. X. Jiang, A. Salvador, W. Kim, O. Aktas, A. Botchkarev, and H. Morkoc, "Mechanisms of Band-Edge Emissions in Mg-Doped P-type GaN," Appl. Phys. Lett. 68, 1883 (1996). PDF
41. G.D. Chen, M. Smith, J. Y. Lin, H. X. Jiang, A. Salvador, B. N. Sverdlov, A. Botchkarev, and H. Morkoc, "Photoluminescence Studies of Band-Edge Transitions in GaN Epitaxial Layers Grown by Molecular Beam Epitaxy," J. Appl. Phys. 79, 2675 (1996). PDF
40. * H. Morkoc, W. Kim, O. Aktas, A. Salvador, A. Botchkarev, D. C. Reynolds, D. C. Look, M. Smith, G. D. Chen, J. Y. Lin, H. X. Jiang, T. J. Schmidt, X. H. Yang, W. Shan, and J. J. Song, "Optical Properties of Mg-GaN, GaN/AlGaN SCH Structures, and GaN on ZnO Substrates," Symposium Proceedings of Materials Research Society, 395, p527, 1996, invited.
39. M. Smith, G. D. Chen, J. Z. Li, J. Y. Lin, H. X. Jiang, A. Salvador, W. Kim, O. Aktas, A. Botchkarev, and H. Morkoc, "Excitonic Recombination in GaN Grown by Molecular Beam Epitaxy," Appl. Phys. Lett. 67, 3387 (1995). PDF
38. M. Smith, G. D. Chen, J. Y. Lin, H. X. Jiang, M. Asif Khan, and C. J. Sun, "Acceptor-Bound Exciton Recombination in p-type GaN," Appl. Phys. Lett. 67, 3295 (1995). PDF
37. G.D. Chen, M. Smith, J. Y. Lin, H. X. Jiang, M. Asif Khan, and C. J. Sun, "Neutral-Donor-Bound Exciton Recombination Dynamics in GaN Grown by Metal- Organic Chemical Vapor Deposition," Appl. Phys. Lett. 67, 1653 (1995). PDF
36. M. Smith, G. D. Chen, J. Y. Lin, H. X. Jiang, A. Salvador, B. N. Sverdlov, A. Botchkarev, and H. Morkoc, "Dynamics of a Band-Edge Transition in GaN Grown by Molecular Beam Epitaxy," Appl. Phys. Lett. 66, 3474 (1995). PDF
35. R.J. Bandaranayake, G. W. Wen, J. Y. Lin, H. X. Jiang, and C. M. Sorensen, "Structural Phase Behavior in II-VI Semiconductor Quantum Dots," Appl. Phys. Lett. 67, 831 (1995). PDF
34. G.W. Wen, J. Y. Lin, and H. X. Jiang, "Quantum-Confined Stark Effects in Semiconductor Quantum Dots," Phys. Rev. B52, 5913 (1995). PDF
33. R.J. Bandaranayake, J. Y. Lin, H. X. Jiang, and C. M. Sorensen, "Structure and Spin-Glass Properties of $Cd_{0.5}Mn_{0.5}S$ Diluted Magnetic Semiconductor Quantum Dots," IEEE, Transactions on Magnetics, 31, 3761 (1995).
32. M. Smith, J. Y. Lin, and H. X. Jiang, "Transport Properties due to Alloy Disorder in $Zn_xCd_{1-x}Se$," Proc. of 22nd International Conference on the Physics of Semiconductors, 3, 1827 (1995).

31. * A. Dissanayake, W. Hein, J. Y. Lin, and H. X. Jiang, "Exciton Dynamics and Quantum- Confined Stark Effects in $CdS_{1-x}Se_x$ Quantum Dots," Proc. of 22nd International Conference on the Physics of Semiconductors, 1, 85 (1995).
30. M. Smith, J. Y. Lin, and H. X. Jiang, "Metal-Insulator Transition In Semiconductor Alloys Probed by Persistent Photoconductivity," Phys. Rev. B51, 4132, (1995). PDF
29. A.S. Dissanayake, J. Y. Lin, and H. X. Jiang, "Quantum-Confined Stark Effects in $CdS_{1-x}Se_x$ Quantum Dots," Phys. Rev. B51, 5457, (1995). PDF
28. A. S. Dissanayake, J. Y. Lin, H. X. Jiang, Z. J. Yu, and J. H. Edgar, "Low Temperature MOCVD Epitaxial Growth and Photoluminescence Characterization of GaN," Appl. Phys. Lett. 65, 2317 (1994).
27. R. J. Bandaranayake, M. Smith, J. Y. Lin, H. X. Jiang, and C. M. Sorensen, "Synthesis and Properties of $Cd_{1-x}Mn_xS$ Diluted Magnetic Semiconductor Nanoparticles," IEEE Trans. on Magnetics, 30, 4930(1994).
26. P. Staikov, D. Baum, J. Y. Lin, and H. X. Jiang, "Evidence for Bistable Defects in 6H-SiC," Solid State Commun. 89, 995 (1994).
25. * P. Staikov, D. Baum, J. Y. Lin, and H. X. Jiang, "Persistent Photoconductivity and Carrier Mobility in Nitrogen Doped 6H-SiC," Proc. of Inter. Conf. on SiC and Related Materials, p235 (1994).
24. A. Dissanayake, J. Y. Lin, and H. X. Jiang, "Persistent Photoconductivity in $Zn_{0.043}Cd_{0.96}Te$ Semiconductor Thin Films," Phys. Rev. B 48, 8145 (1993).
23. J. Y. Lin, A. Dissanayake, and H. X. Jiang, "DX Centers in $Al_{0.34}Ga_{0.66}As$ Amorphous Thin Films," Solid State Commun. 87, 787 (1993).
22. J. Y. Lin, A. Dissanayake, and H. X. Jiang, "Electric-Field-Enhanced Persistent Photoconductivity in a $Zn_{0.02}Cd_{0.98}Te$ Semiconductor Alloy," Phys. Rev. B 46, 3810 (1992).
21. A. S. Dissanayake, M. Elahi, H. X. Jiang, and J. Y. Lin, "Kinetics of Persistent Photoconductivity in $Al_{0.3}Ga_{0.7}As$ and $Zn_{0.3}Cd_{0.7}Se$ Semiconductor Alloys," Phys. Rev. B 45, 13996 (1992).
20. H. X. Jiang, A. Dissanayake, and J. Y. Lin, "Band-Tail States in a $Zn_{0.3}Cd_{0.7}Se$ Semiconductor Alloy Probed by Persistent Photoconductivity," Phys. Rev. B 45, 4520 (Rapid Commun.) (1992).
19. A. S. Dissanayake, S. X. Huang, H. X. Jiang, and J. Y. Lin, "Charge Storage and Persistent Photoconductivity in a $CdS_{0.5}Se_{0.5}$ Semiconductor Alloys," Phys. Rev. B 44, 13343 (1991).
18. H. X. Jiang, G. Brown, and J. Y. Lin, "Persistent Photoconductivity in II-VI and III-V Semiconductor Alloys and a Novel Infrared Detector," J. Appl. Phys. 69, 6701 (1991).
17. J. Y. Lin, D. Baum, A. Honig, and H. X. Jiang, "Dynamics of Bound-Exciton Energy Transformation to Edge-Luminescence Centers in CdS," J. Lumines. 45, 251 (1990).
16. J. Y. Lin, S. X. Huang, L. Q. Zu, E. X. Ping, and H. X. Jiang, "Persistent Photoconductivity In $Cd_{0.7}Zn_{0.3}Se$ Mixed Crystals," J. Lumines. 45, 198 (1990).
15. H. X. Jiang, L. Q. Zu, and J. Y. Lin, "Dynamics of Exciton Localization in $CdSe_{0.5}S_{0.5}$ Mixed Crystals," Phys. Rev. (Rapid Commun.) B 42, 7284 (1990).
14. J. Y. Lin, A. Dissanayake, G. Brown, and H. X. Jiang, "Relaxation of Persistent Photoconductivity in $Al_{0.3}Ga_{0.7}As$," Phys. Rev. B 42, 5855 (1990).
13. H. X. Jiang, E. X. Ping, P. Zhou, J. Y. Lin, "Dynamics of Exciton Transfer Between the Bound and the Continuum States in GaAs-$Al_xGa_{1-x}As$ Multiple Quantum Wells," Phys. Rev. B (Rapid Commun.) 41, 12949 (1990).
12. J. Y. Lin and H. X. Jiang, "Relaxation of Stored Charge Carriers in $Zn_{0.3}Cd_{0.7}Se$ Mixed Crystals," Phys. Rev. B 41, 5178 (1990).
11. H. X. Jiang and J. Y. Lin, "Percolation Transition of Persistent Photoconductivity in II-VI Mixed Crystals," Phys. Rev. Lett. 64, 2547 (1990).
10. J. Y. Lin and H. X. Jiang, "Electronic Structure and Dispersion of Compensated n-i-p-i Superlattices with Small Period Lengths," Phys. Rev. B 40, 5561 (1989).
9. H. X. Jiang and J. Y. Lin, "Persistent Photoconductivity and Related Critical Phenomena in $Zn_{0.3}Cd_{0.7}Se$," Phys. Rev. (Rapid Commun.) B 40, 10025 (1989).
8. J. Y. Lin, Q. Zhu, D. Baum, and A. Honig, "Direct Observation of Edge-Luminescence Excited by Long-Lived-Exciton-Polariton Propagation in CdS," Phys. Rev. (Rapid Commun.) B40, 1385 (1989).
7. H. X. Jiang and J. Y. Lin, "Semiconductor Superlattices with Periodic Disorder," J. Appl. Phys. 63, 1984 (1988).

6. H. X. Jiang and J. Y. Lin, "Band Structure of Non-Ideal Semiconductor Superlattices," Superlattices and Microstructures 3, 689 (1987).
5. H. X. Jiang and J. Y. Lin, "Band Structure of Superlattices with Graded Interfaces," J. Appl. Phys. 61, 624 (1987).
4. H. X. Jiang and J. Y. Lin, "Band-structure of a periodic potential with 2 wells and 2 barriers per period," Am. J. Phys. 55, 462 (1987).
3. H. X. Jiang and J. Y. Lin, "Superlattice with Multiple Layers per Period," Phys. Rev. B 33, 5851 (1986).
2. H. X. Jiang and J. Y. Lin, "The Ground State of a Particle under the Influence of a Uniformly Charged Sphere," Am. J. Phys. 54, 1046 (1986).
1. H. X. Jiang and J. Y. Lin, "Precession of Kepler's Orbit," Am. J. Phys. 53, 694 (1985).

Invited reviews in scientific journals

1. H. X. Jiang and J. Y. Lin, Book Review for "Properties of Advanced Semiconductor Materials: GaN, AlN, InN, BN, SiGe, by Michael E. Levinshtein, Serge L. Rumyantsev, and Michael S. Shur, Eds (John Wiley & Sons, New York, 2001), MRS Bulletin, Vol. 26, 728 (2001), invited.
2. H. X. Jiang and J. Y. Lin, "AlGaN and InAlGaN Alloys – Epitaxial Growth, Optical and Electrical Properties, and Applications," in a special issue of Opto-Electronics Review, 10, 271 (2002), invited.
3. H. X. Jiang and J. Y. Lin, "Advances in III-Nitride Microstructures and Micro-Size Emitters," J. of the Korean Physical Society, 42, S757 (2003), invited.
4. J. Y. Lin and H. X. Jiang, "Recent Advances in III-Nitride Ultraviolet Photonic Materials and Devices," J. of the Korean Physical Society, 42, S535 (2003), invited.
5. J. Y. Lin, H. X. Jiang, and J. Zavada, "Nitride Photonic Crystals," Eighth International Symposium on Contemporary Photonics Technology, Tokyo, Japan (January 2005), *invited*.
6. J. Y. Lin and H. X. Jiang, "III-Nitride Ultraviolet Photonic Materials – Epitaxial Growth, Optical and Electrical Properties, and Applications," Proceedings of SPIE on Quantum Sensing, 4999, 287 (2003), invited.
7. H. X. Jiang & J. Y. Lin, "III-Nitride Quantum Devices – Microphotonics," CRC Critical Reviews in Solid State and Materials Sciences, (P. Holloway, Editor), 28, 131 (2003), invited.
8. Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "III-nitride deep ultraviolet micro- and nano-photonics," Proc. SPIE 6127, 61271C (2006), invited.
9. Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "Achieving conductive high Al-content AlGaN alloys for deep UV photonics," Proc. SPIE 6479, 64791I (2007), invited
10. Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "III-nitride micro-emitter arrays: development and applications," J. Phys. D: Appl. Phys. 41, 094001 (2008), invited.
11. B N. Pantha, J. Y. Lin, and H. X. Jiang, "III-nitride nanostructures for energy generation," Proc. SPIE 7608, 76081I (2010); invited.
12. S. Majety, X. K. Cao, R. Dahal, B. N. Pantha, J. Li, J. Y. Lin and H. X. Jiang, "Semiconducting hexagonal boron nitride for deep ultraviolet photonics," Proc. SPIE 8268, 82682R (2012); invited.
13. J. Day, J. Li, D. Y. C. Lie, C. Bradford, J. Y. Lin and H. X. Jiang, "Full-Scale Self-Emissive Blue and Green Microdisplays Based on GaN Micro-LED Arrays," Proc. SPIE 8268, 82681X (2012); invited.
14. X. K. Cao, S. Majety, J. Li, J. Y. Lin and H. X. Jiang, "Optoelectronic properties of hexagonal boron nitride epilayers," Proc. SPIE **8631**, 863128 (2013); invited.
15. H. X. Jiang and J. Y. Lin, "Nitride micro-LEDs and beyond - a decade progress review," Optics Express, 21, A475 (2013); invited.
16. H. X. Jiang, and J. Y. Lin, "Hexagonal boron nitride for deep ultraviolet photonic devices," (in special section "Deep UV LEDs", Guest editors: Jung Han, Hiroshi Amano and Leo Scholwalter), Semicon. Sci. Technol. 29, 084003 (2014), *Invited review*.
17. H. X. Jiang and J. Y. Lin, "Review—Hexagonal Boron Nitride Epilayers: Growth, optical properties and device applications," ECS J. Solid State Sci. Technol. 6, Q3012 (2017). *Invited review*.

Invited feature articles written for popular magazines

1. H. X. Jiang and J. Y. Lin, "Microdisplays Based on III-Nitride Wide Band Gap Semiconductors," **oe** magazine (The Monthly Publication of SPIE-The internal Society for Optical Engineering), July 2001 issue, page 28, *invited.*
2. H. X. Jiang and J. Y. Lin, "Advances in III-Nitride Micro-Size Light Emitters," III-Vs Review, 14, 35 (2001) [June/July 2001 issue], *invited.*
3. H. X. Jiang, J. Y. Lin, R. Hui, and J. Zavada, "III-nitrides show promise for telecomm wavelengths," Laser Focus World, Nov. issue, S8 (2003), *invited.*
4. J. Y. Lin, J. Day, J. Li, D. Lie, C. Bradford, and H. X. Jiang, "High-resolution group III-nitride microdisplays," SPIE Newsroom, Dec. issue (2011), *invited.*
5. H. X. Jiang and J. Y. Lin, "Semiconductor lasers: Expanding into blue and green," Nature Photonics 5, 521 (2011), *invited.*

Invited book chapters

1. H. X. Jiang and J. Y. Lin, "Time-Resolved Photoluminescence Studies of GaN," A3.5 in *Gallium Nitride and Related Compounds*, *EMIS Datareview Series*, *Edited by J. Edgar, S. Strite, I. Akasaki, H. Amano, and C. Wetzel,* (The Institute of Electrical Engineers, London, 1999).
2. H. X. Jiang and J. Y. Lin, "Persistent Photoconductivity in GaN," *A3.6* in *Gallium Nitride and Related Compounds*, *EMIS Datareview Series*, *Edited by J. Edgar, S. Strite, I. Akasaki, H. Amano, and C. Wetzel,* (The Institute of Electrical Engineers, London, 1999).
3. H. X. Jiang and J. Y. Lin, "Persistent photoconductivity in III-nitrides," *Chapter 5 in "III-Nitride Semiconductors: Electrical, Structural and Defects Properties" edited by M. O. Manasreh*, (Elsevier Science, 2000).
4. H. X. Jiang, J. Y. Lin, and W. W. Chow "Time-Resolved Photoluminescence Studies of III-Nitrides," Chapter 1 in *"Optical Properties of III-Nitrides I" edited by* M .O. Manasreh and H. X. Jiang, (Taylor & Francis Books, New York & London 2002).
5. H. X. Jiang and J. Y. Lin, "III-Nitride Micro-Cavity Light-Emitters," – in *"Wide Bandgap Light-Emitting Materials and Devices,"* edited by G.F. Neumark, I. Kuskovsky, and H. X. Jiang, published by Wiley –VCH Verlag GmbH, 2007.
6. H. X. Jiang and J. Y. Lin, "Carrier Dynamics Probed by Time-Resolved Photoluminescence,"– in "*Ultrafast Dynamics Processes in Semiconductors,*" Book Volume 92 – Topics in Applied Physics, edited by K. T. Tsen, published by Springer-Verlag Berlin, (Berlin Heidelberger, 2004).
7. H. X. Jiang & J. Y. Lin**, "**AlN Epitaxial Layers for UV Photonics" – Chapter 7 in *Optoelectronic Devices: III-Nitride*, edited by M. Razeghi and M. Heini, published by Elsevier Ltd. (Amsterdam, 2004).
8. R. Dahal, J. Y. Lin, H. X. Jiang, and J. Zavada "Er doped $In_xGa_{1-x}N$ for optical communications," Chapter 5 in *Rare-earth doped III-Nitrides for Optoelectronic and Spintronic Applications*, edited by K O'Donnell & V Dierolf, Canopus Academic Publishing Ltd and Springer SBM (2010).
9. J. Li, J. Y. Lin, H. X. Jiang, and N. Sawaki, "III-nitrides on Si substrate," Chapter 3 in *III-V Compound Semiconductors: Integration with Silicon Based Microelectronics*, edited by T. Li, et al, published by CRC Press (Boca Raton 2010).
10. A. Sedhain, J. Y. Lin, and H. X. Jiang "AlN: Properties and Applications," Chapter 2 in "*Handbook of Luminescent Semiconductor Materials*," edited by L. Bergman and L. McHale, published in September, 2011 by CRC Press, Taylor & Francis Group (ISBN: 1439834679).
11. N. Pantha, J. Y. Lin, and H. X. Jiang, "High qaulity Al-rich AlGaN alloys," Chapter 2 in "*GaN and ZnO-based Materials and Devices*," edited by S.J. Pearton, published in February 2012 by Springer, Springer Series in Materials Science (ISBN: 978-3-642-23520-7).

12. T. N. Oder, J. Y. Lin, and H. X. Jiang, “III-nitride photonics crystals for lighting applications,” Chapter 6 in “Handbook of Microcavities” (edited by A. H. W. Choi, Pan Stanford Publishing, 2015), ISBN 978-981-4463-24-9 (Hardcover), 978-981-4463-25-6 (ebook).
13. N. Napal, H. X. Jiang, J. Y. Lin, B. Mitchell, V. Dierolf, and J. M. Zavada, "MOCVD growth of Er-doped III-N and optical-magnetic characterization," *Chapter 7* in *"Rare Earth and Transition Metal Doping of Semiconductor Materials: Synthesis, Magnetic Properties and Room Temperature Spintronics,"* edited by V. Dierolf, I. T. Ferguson, and J. M. Zavada, Woodhead Publishing, Elsevier, 2016, pp. 225-255.

Conference Presentations

Over 100 additional contributed presentations and abstracts delivered by our graduate students and postdoctoral research associates in national and international conferences.