

Curriculum Vitae

Talal Al tahtamouni

Qatar University
Materials Science & Technology
College of Arts & Science Doha
2713, Qatar
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Education

- **Doctor of Philosophy** in Solid State Physics, Kansas State University, Kansas, USA, December 2007; Dissertation title: "*MOCVD growth and characterization of Al rich AlN/AlGaN epilayers and quantum wells*"
- **Master of physics**, Western Michigan University, Michigan, USA, 2003.
- **Bachelor of Physics**, Yarmouk University, Irbid, Jordan, 1994.

Professional employment

- *Professor*, (April 2020), Materials Science and Technology Matser Program, Qatar University, Doha, Qatar.
- *Associate Professor*, (September 2015-April 2020), Materials Science and Technology Matser Program, Qatar University, Doha, Qatar.
- *Coordinator of Materials Science Master Program*, (September 2016-now), Qatar University, Doha, Qatar.
- *Associate Professor*, (December 2013-September 2015), Department of Physics, Yarmouk University, Irbid, Jordan.
- *Assistant Professor*, (February 2009–December 2013), Department of Physics, Yarmouk University, Irbid, Jordan.
- *Graduate Research Assistant*, (January 2004 - December 2007) GaN semiconductor Group, Department of Physics, Kansas State University, Manhattan, KS 66506, USA.

- *Graduate Teaching Assistant*, (January 2002 - December 2003) Department of Physics, Western Michigan University, Michigan, USA.
- *High School Teacher* (January 1994 – December 2001).

Research Interests

- Design, deposition and fabrication of semiconductor structures and optoelectronic devices.
- Design, deposition and fabrication of 2D materials and metal oxide heterostructures for hydrogen production by photoelectrochemical water splitting.
- Transport and optical studies of thin-films and heterostructures
- Deposition of thin films for solar cell fabrication and device characterization

Teaching experience

Developed, taught, graded and administered many physics and materials science for both graduate and undergraduate levels.

Course title	Level
Functional Properties of Materials	Graduate
Mechanics of Materials	Graduate
Surface Science and Corrosion	Graduate
Introduction to Nanotechnology and Advanced Characterization Methods	Graduate
Research Methodology	Graduate
Materials Science	Graduate
Special Topics/ Semiconductor Materials and Applications	Graduate
Solid State Physics	Graduate
Quantum mechanics	Undergraduate
Classical Mechanics	Undergraduate
Electrodynamics	Undergraduate
Modern physics	Undergraduate
Mathematical Methods of Physics	Undergraduate
Light and Waves	Undergraduate
Electromagnetism	Undergraduate
Introduction to Mechanics	Undergraduate
Conceptual Physics	Undergraduate

MSc students' supervision

Abdullah Alashraf, Nitrogen and sulfur- doped Nanofiber mixed oxides composites for supercapacitor applications, Qatar University, spring 2016, **Committee member**

Aisha Al-Saygh, New flexible Polyvinyliden fluride (PVDF) nanocomposites for future applications, Qatar University, fall 2016, **Committee member**

Yahya Zakaria, Er-doped III-Nitride Semiconductors, Qatar University, spring 2017, **Main supervisor**

Ali Fateh Assi, Preparation and Characterization of Hybrid Fiberglass/Carbon fiber and nanofiber Composite Materials, Qatar University, spring 2017, **Committee member**

Hanaa Dawoud, Preparation and characterization of flexible all solid CNT-MnO₂ for supercapacitor, Qatar University, spring 2018, **Main supervisor**

Latifa Al-Romaihi, Single step electrodeposition of CZTS thin film for solar cell application, Qatar University, spring 2018, **Main supervisor**

Hana Kadavil, Preparation and characterization of Electrospun: Composite nanofibers for Biomedical Applications, Qatar University, fall 2018, **Main supervisor**

Elizabeth Thekkethottiyil, Use of boron nitride nanoparticles as additives for a new superhydrophobic coating material for protection against corrosion, Qatar University, fall 2018, **Main Supervisor**

Cherivah Mannah, Superhydrophobic nanocomposite coatings for protection against corrosion, Qatar University, spring 2019, **Committee member**

Mohamed Helal, Study of the Ion Interclation Mechanism in Mxene Membrane for the Water Treatment Applications, Qatar University, spring 2019, **Committee member**

Samar Shurbaji, The influence of shear stress on nanomaterial's uptake by cancer cell lines, Qatar University, spring 2019, **Committee member**

Fadi Kamand, Fabrication of heterostructured TiO₂ nanorods for enhanced solar water splitting, Qatar University, spring 2020, **Main supervisor**

Nusyba Hassan, Er doped GaN-AlN quantum well structures for improved 1.54 μ m emission, Qatar University, expected to defend fall 2020, **Main supervisor**

Fatma Nabhan, Novel highly antibacterial and corrosion resistant NiP-C₃N₄ nanocomposite coatings: multi-porous carbon nitride nanostructures with and without zinc dopant, Qatar University, expected to defend fall 2020, **Committee member**

Funds and Research Proposals

- . Title: Development of sustainable thermo-electric materials from earth-abundant, cost-effective and non-toxic resources
Role: PI
Source of Support: Qatar University
Award Amount: 285000 QR
Period: 2020 - 2022
- . Title: Development of improved, super high energy, all-solid lithium-sulfur batteries
Role: PI
Source of Support: Qatar University
Award Amount: 285000 QR
Period: 2020 - 2022
- . Title: Improvement of hydrogen production under solar light by using Ni doped – BiFeO₃ photocatalyst
Role: LPI
Source of Support: Qatar University
Award Amount: 20,000 QR
Period: 12/01/2020 -30/04/2020
- . Title: Rare earth doped Super lattice and Quantum Well Structures for Optoelectronic Devices
Role: LPI
Source of Support: Qatar University
Award Amount: 20,000 QR
Period: 25/08/2019-28/11/2019
- .Title: Fundamental studies of BAlN and BGaN wide bandgap semiconductors;
Role: LPI
Source of Support: GCC Research Council
Award Amount: \$80,000 per year (292,000 QR per year) for three years
Period: 01/01/2017- 31/12/2019
- .Title: Optimized CZTS absorber layers for solar cell applications;
Role: LPI
Source of Support: Qatar University

Award Amount: 20,000 QR
Period: 01/01/2018-31/12/2019

.Title: Growth and Device Processing of hexagonal Boron Nitride and Graphene Heterostructures for Deep Ultraviolet Detectors

Role: LPI
Source of Support: Qatar University
Award Amount: 20,000 QR
Period: 01\06\2017- 31\12\2017

.Title: Synthesis and characterization of high quality boron carbon nitride alloys

Role: LPI
Source of Support: Qatar University
Award Amount: 15,500 QR
Period: 05\01\2017- 31\12\2017

. Title: III-nitride based one-dimensional nanostructures for optoelectronic applications

Role: LPI
Source of Support: Qatar University
Award Amount: 15,850 QR
Period: 05\01\2017- 31\12\2017

. Title: Growth and Characterization of Erbium doped III-nitride semiconductor materials

Role: LPI
Source of Support: Qatar University
Award Amount: 10,000 QR
Period: 21\02\2016- 31\12\2016

.Title: Er-doped GaN/AlN quantum well nanostructures

Role: LPI
Source of Support: Qatar University
Award Amount: 10,000 QR
Period: 18\05\2016- 31\12\2016

. Title: Preparation and Characterization of Electro spun Composite nanofibers for Biomedical Applications

Role: LPI
Source of Support: Qatar University
Award Amount: 33,000 QR

Period: 8\06\2016- 31\12\2016

Reviewer at the Following Journals

ACS Applied Nano Materials

IOP/ 2D Materials Journal

Applied Physics Letters

International Journal of Energy Research

Journal of Physics D: Applied Physics

American Institute of Physics (AIP) Advances

Publications

Pham Thi Huonga, Kim Jitae, **T.M.AI Tahtamouni**, Nguyen Le Minh Tri, Hak-Hyeon Kim, Kyung Hwa Cho, Changha Lee, Novel activation of peroxy monosulfate by biochar derived from rice husk toward organic contaminants in wastewater, **Journal of Water Process Engineering**, 33, 2020

Nguyen Le Minh Tria,b, Phan Quang Thangc, Lam Van Tand, Pham Thi Huongc, Jitae Kimc, Nguyen Minh Viet, Nguyen Minh Phuong, **T.M. AI Tahtamouni**, Removal of phenolic compounds from wastewaters by using synthesized Fe-nano zeolite, **Journal of Water Process Engineering**, 33, 2020

Tran Nam Trung, Fadi Z.Kamand, **T.M.AI tahtamouni**, Elucidating the mechanism for the chemical vapor deposition growth of vertical MoO₂/MoS₂ flakes toward photoelectrochemical applications, **Applied Surface Science**, 505, 2020

Nguyen Thi Nham, **T M AI Tahtamouni**, Trinh Duy Nguyen, Pham Thi Huong, Kim Jitae, Nguyen Minh Viet, Nguyen Van Noi, Nguyen Minh Phuong, Nguyen Thi Hoang, Synthesis of iron modified rice straw biochar toward arsenic from groundwater, **Materials Research Express**, 6, 2019

Phan Quang Thang, Kim Jitae, Trinh Duy Nguyen, Pham Thi Huong, Nguyen Minh Viet, **T. M. AI Tahtamouni**, Improvement of hydrogen production under solar light using cobalt (II) phosphide hydroxide co-doped g-C₃N₄ photocatalyst, **Rend. Fis. Acc. Lincei** 30, 699–706 (2019)

Nguyen Minh Viet, Do Quang Trung, Bach Long Giang, Nguyen Le Minh Tri, Phuong Thao, T.H. Pham, Fadi Z. Kamand, **T.M. AI Tahtamouni**, Noble metal -doped graphitic carbon

nitride photocatalyst for enhancement photocatalytic decomposition of antibiotic pollutant in wastewater under visible light, **Journal of Water Process Engineering**, 32, **2019**

Nguyen Le Minh Tri, Kim Jitae, Long Giang Bach, **T. M. Al tahtamouni**, Pham Thi Huong, Changha Lee, Nguyen Minh Viet, and Do Quang Trung, Ag-doped graphitic carbon nitride photocatalyst with remarkably enhanced photocatalytic activity towards antibiotic in hospital wastewater under solar light, **Journal of Industrial and Engineering Chemistry**, accepted, **2019**

Nasr Bensalah, Fadi Kamand, Hanaa Dawoud, Moustafa Zagho, **Talal Altahtamouni**, Silicon nanofilms as anode materials for flexible lithium ion batteries, **Thin Solid Films**, 690, **2019**

Nguyen Le Minh Tri, Kim Jitae, Doan Van Thuan, Pham Thi Huong and **T. M. Al Tahtamouni**, Improved photocatalytic decomposition of methyl ethyl ketone gas from indoor air environment by using TiO₂/Graphene Oxide, **Materials Research Express**, Volume 6(10), **2019**

Trinh Nguyen, Quynh Bui, Tien Le, **T. M. Altahtamouni**, Khanh Vu, Dai-Viet Vo, Nhan Le, Tuan Luu, Seong Hong and Kwon Lim, Co²⁺ substituted for Bi³⁺ in BiVO₄ and its enhanced photocatalytic activity under visible LED light irradiation, **RSC Advances**, Volume 9(41) , **2019**

Nguyen Tri, Do Trung, Doan Thuan, Nguyen Cam, **T. M. Al Tahtamouni**, Thanh Pham, Dao Duc, Mai Hung Thanh Tung; Hoang Van Ha, Ngo Thu, Hoang Trang, The advanced photocatalytic performance of V doped CuWO₄ for water splitting to produce hydrogen, **International Journal of Hydrogen Energy**, Volume 44, **2019**

Nguyen Le Minh Tri, Dao Sy Duc, Van Thuan Doan, **T. M. Al tahtamouni**, Thanh Dong Pham, Dinh Trinh Tran, Nguyen Van Noi, Superior photocatalytic activity of Cu doped NiWO₄ for efficient degradation of benzene in air even under visible radiation, **Chemical Physics**, Volume 525, **2019**

Nguyen Thi, Dao Duc, Doan Thuan, **T. M. Al Tahtamouni**; Thanh Pham, Minh Nguyen, Nguyen Phuong, Nguyen Noi, The advanced photocatalytic degradation of Atrazine by direct Zscheme Cu doped ZnO/g-C₃N₄, **Applied Surface Science**, Volume 489, **2019**

Hana D. Dawoud, Nasr Bensalah, **Talal M Altahtamouni**, Sputtered manganese oxide thin film on carbon nanotubes sheet as a flexible and binder-free electrode for supercapacitors, **International Journal of Energy Research**, Volume 43 (3), **2019**

Hana Kadavil, Moustafa Zagho, Ahmed Elzatahry and **Talal Altahtamouni**, "Sputtering of Electrospun Polymer-Based Nanofibers for Biomedical Applications: A Perspective" **Nanomaterials Journal**, Volume 9 (1), 77, **2019**

Vinh Xuan Ho, **Talal Altahtamouni**, Hongxing Jiang, Jingyu Lin, John Zavada, and Nguyen Q. Vinh, "Room-temperature lasing action in GaN quantum wells in the infrared 1.5 μm region" **ACS Photonics**, 5 (4), pp 1303–1309, **2018**

Haiding Sun, Feng Wu, Young Jae Park, **T. M. Al tahtamouni**, Che-Hao Liao, Wenzhe Guo, Nasir Alfaraj, Kuang-Hui Li, Dalaver H. Anjum, Theeradetch Detchprohm, Russell D. Dupuis, Xiaohang Li, "Revealing microstructure and dislocation behavior in BAlN/AlGaIn heterostructures", **Applied physics express**, Volume 11, 011001, **2018**

Aicha S. Lemine, Moustafa M. Zagho, **T. M. Altahtamouni** and Nasr Bensalah, Graphene a promising electrode material for supercapacitors-A review, **International Journal of Energy Research**, 1–17, **2018**

[\(Top downloaded paper in 2018- 2019 in the International Journal of Energy Research\)](#)

Moustafa M. Zagho, Hana D. Dawoud, Nasr Bensalah and **T. M. Altahtamouni**, A brief overview of RF sputtering deposition of boron carbon nitride (BCN) thin films, **Emergent Materials**, <https://doi.org/10.1007/s42247-018-0018-9>, **2018**

H. Sun, F. Wu, **T. M. Al tahtamouni**, N. Alfaraj, K.-H. Li, T. Detchprohm, R. D. Dupuis, and X. Li, "Structural properties, crystal quality and growth modes of MOCVD-grown AlN with TMAI pretreatment of sapphire substrate," **Journal of Physics D: Applied Physics**, Volume 50, pp 395101, **2018**

Haiding Sun, Feng Wu, Young Jae Park, **T. M. Al tahtamouni**, Kuang-Hui Li, Nasir Alfaraj, Theeradetch Detchprohm, Russell D. Dupuis, and Xiaohang Li "Influence of TMAI preflow on AlN epitaxy on sapphire" **Applied Physics Letters** 110, 192106, **2017** (Featured in **Compound Semiconductor Magazine** Volume 23 Issue 3 April/May **2017**

https://compoundsemiconductor.net/article/101476/Researchers_reveal_secrets_of_metalorganic_preflow_for_AlN_MOCVD_process)

Hana D Dawoud, **Talal M Altahtamouni**, Moustafa M Zagho, Nasr Bensalah "A brief overview of flexible CNT/PANI super capacitors" **Materials Science and Nanotechnology** Volume 1, Issue 2, **(2017)**

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**, volume 6, pp 3476, **2016**

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”, **Applied Physics Letters**, Volume 106, 121106 , **2015**

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**, volume 5, pp 649, **2015**

T. M. Al tahtamouni, X. Z. Du, J. Li, J. Y. Lin and H. X. Jiang, “Erbium-doped α -plane GaN epilayers synthesized by metal-organic chemical vapor deposition” **Optical Materials Express**, volume 5, pp 274, **2015**

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**

T. M. Al Tahtamouni, J. Y. Lin, H. X. Jiang, “Effects of double layer AlN buffer layers on properties of Si-doped $\text{Al}_x\text{Ga}_{1-x}\text{N}$ for improved performance of deep ultraviolet light emitting diodes”, **Journal of applied physics**, Volume 113, pp 123501, **2013**

[\(Among the top 25% most downloaded articles published in the Journal of Applied Physics since January 1, 2013\)](#)

T. M. Al Tahtamouni, J. Y. Lin, H. X. Jiang, “High quality AlN grown on double layer AlN buffers on SiC substrate for deep ultraviolet photodetectors”, **Applied Physics Letters**, Volume 101, pp 192106 , **2012**

T. M. Al Tahtamouni, J. Y. Lin, H. X. Jiang, “Optical polarization in c-plane Al-rich AlN/ $\text{Al}_x\text{Ga}_{1-x}\text{N}$ single quantum wells”, **Applied Physics Letters**, Volume 101, pp 042103, **2012**.

T. M. Al Tahtamouni, J. Li, J. Y. Lin, H. X. Jiang, “Surfactant effects of gallium on quality of AlN epilayers grown via metal organic chemical vapor deposition on SiC substrates”, **Journal of Physics D: Applied Physics**, Volume 45, pp 285103, **2012**.

T. M. Al Tahtamouni, A. Sedhain, J. Y. Lin, H. X. Jiang, “Beryllium doped p-type GaN grown by metal-organic chemical vapor deposition”, *The Jordanian Journal of Physics*, vol. 3, No. 2, pp 77, **2010**

A. Sedhain, **T. M. Al Tahtamouni**, J. Li, J. Y. Lin, H. X. Jiang, "Beryllium acceptor binding energy in AlN", **Applied Physics Letters**, Volume 93, pp 141104 **2008**

A. Sedhain, N. Nepal, M. L. Nakarmi, **T. M. Al Tahtamouni**, J. Y. Lin, H. X. Jiang, Z. Gu, J. H. Edgar "Photoluminescence properties of AlN homoepilayers with different orientations", **Applied Physics Letters**, Volume 93, pp 041905 **2008**

T. M. Al Tahtamouni, A. Sedhain, J. Y. Lin, H. X. Jiang, "Si-doped high Al-content AlGa_N epilayers with improved quality and conductivity using indium as a surfactant" **Applied Physics Letters**, Volume 92, pp 092105 **2008**

T. M. Al Tahtamouni, A. Sedhain, J. Y. Lin, H. X. Jiang, "Growth and optical properties of a-plane AlN and quantum wells grown on r-plane sapphire substrates", **physica status solidi (c)**, volume 5, pp 1568-1570 **2008**

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", **physica status solidi (c)**, volume 5, pp 21482151 **2008**

R. Dahal, **T. M. Al Tahtamouni**, J. Y. Lin, H. X. Jiang, "AlN avalanche photodetectors", **Applied Physics Letters**, Volume 91, pp 243503 **2007**

B. N. Pantha, N. Nepal, **T. M. Al Tahtamouni**, M. L. Nakarmi, J. Li, J. Y. Lin, H. X. Jiang, "Correlation between biaxial stress and free exciton transition in AlN epilayers" **Applied Physics Letters**, Volume 91, 121117 **2007**

R. Dahal, **T. M. Al Tahtamouni**, Z. Y. Fan, J. Y. Lin, H. X. Jiang, "Hybrid AlN–SiC deep ultraviolet Schottky barrier photodetectors", **Applied Physics Letters**, Volume 90, pp 263505 **2007**

T. M. Al Tahtamouni, A. Sedhain, J. Y. Lin, H. X. Jiang, "Growth and photoluminescence studies of *a*-plane AlN/Al_xGa_{1-x}N quantum wells", **Applied Physics Letters**, Volume 90, 221105 **2007**

T. M. Al Tahtamouni, N. Nepal, J. Y. Lin, H. X. Jiang, W. W. Chow, "Growth and photoluminescence studies of Al-rich AlN/Al_xGa_{1-x}N quantum wells", **Applied Physics Letters**, Volume 89, 131922 **2006**.

M. L. Nakarmi, N. Nepal, C. Ugolini, **T. M. Al tahtamouni**, J.Y. Lin, H. X. Jiang, "Correlation between optical and electrical properties of Mg-doped AlNepilayers" **Applied Physics Letters**, Volume 89, 152120 **2006**.

Conference articles

1. V. X. Ho, **T. M. Al tahtamouni**, Y. Wang, H. X. Jiang, J. Y. Lin, J. M. Zavada, and N. Q. Vinh, "Telecommunication-Wavelength Lasing in Er-doped GaN Multiple Quantum Wells at Room Temperature," in *Laser Congress 2018 (ASSL)*, OSA Technical Digest (Optical Society of America, 2018), paper ATu4A.2.

Encyclopedia of Nanotechnology

T. M. Al tahtamouni, contributed "Light emitting diodes" the Encyclopedia of Nanotechnology, Springer, November **2016** (DOI: 10.1007/978-94-0179780-1_100897)

Conference Presentations

T. M. Al Tahtamouni; Fadi Kamand "Controlled Synthesis of Vertically-Oriented MoS₂ Flakes by Chemical Vapor Deposition: Morphological Evolution and Growth Mechanism" MRS, Boston, USA, **2019**

T. M. Al Tahtamouni; **J. Y. Lin**, **H. X. Jiang** "MOCVD Growth and Characterization of Er Doped III-Nitride Epilayers and Quantum Well Structures" MRS, Boston, USA, **2018**

V. Ho, **T. Al Tahtamouni**; Y. Wang; H. Jiang; J. Lin; J. Zavada; N. Vinh "Telecommunication-Wavelength Lasing in Er-doped GaN Multiple Quantum Wells at Room Temperature" OSA Laser Congress, Boston, USA, **2018**

T. M. Al tahtamouni, Haiding Sun, Feng Wu, Nasir Alfaraj, Kuang-Hui Li, Xiaohang Li "Effect of TMAI pretreatment of sapphire substrate on the properties of MOCVD grown AlN epilayers" 14th international conference on Materials Science and Engineering, Las Vegas, USA, **2017**

Haiding Sun, Feng Wu, **T. M. Al tahtamouni**, Nasir Alfaraj, Theeradetch Detchprohm, Russel D. Dupuis, Xiaohang Li, " Strain and compositional analysis of BAlN/Al(Ga)N structures for distributed Bragg reflector applications," 12th International Conference on Nitride Semiconductors (ICNS-12), Strasbourg, France, July **2017**

Haiding Sun, Feng Wu, **Talal M. Altahtamouni**, Nasir Alfaraj, Theeradetch Detchprohm, Russell D. Dupuis, Xiaohang Li, " Study of TMAI-induced carbon impurity on AlN film polarity and growth mode on sapphire" 12th International Conference on Nitride Semiconductors (ICNS-12), Strasbourg, France, July **2017**

H. Sun, F. Wu, **T. M. Al tahtamouni**, D. H. Anjum, N. Alfaraj, T. Detchprohm, R. D. Dupuis, and X. Li, " Investigation of Microstructure, Strain and Defect of BAlN/Al(Ga)N Heterostructures" 59th Electronic Material Conference (**EMC**), South Bend, IN, USA, **June 2017**

H. Sun, F. Wu, **T. M. Al tahtamouni**, N. Alfaraj, T. Detchprohm, R. D. Dupuis, and X. Li, "Structural Properties and Growth Modes of MOCVD-Grown AlN with TMAI Pretreatment of Sapphire Substrate" 59th Electronic Material Conference (**EMC**), South Bend, IN, United States, June **2017**

H. Sun, F. Wu, Y. J. Park, **T. M. Al tahtamouni**, N. Alfaraj, T. Detchprohm, R. D. Dupuis, and X. Li, " Control of polarity, crystal quality and growth mode of AlN films by MOCVD" 17th European Workshop on Metal-Organic Vapour Phase Epitaxy (**EW-MOVPE 17**), Grenoble, France, June **2017**

H. Sun, F. Wu, **T. M. Al tahtamouni**, N. Alfaraj, T. Detchprohm, R. D. Dupuis, and X. Li, " Structural characterizations of high B-content BAlN/Al(Ga)N heterostructures grown by MOCVD " 17th European Workshop on Metal-Organic Vapour Phase Epitaxy (**EWMOVPE 17**), Grenoble, France, June **2017**

T. M. Al tahtamouni, J. Li, "High n-Type Conduction in Si-Doped Al_{0.84}Ga_{0.16}N Epilayers for Deep Ultraviolet Emitters" MRS Spring meeting, Phoenix, Arizona, USA, **2017**

T. M. Al tahtamouni, J. Li, J. Y. Lin, and H. X. Jiang, "1.54 μm light emitting devices based on Er-doped GaN/AlGa_xN multiple quantum well structures grown by metalorganic chemical vapor deposition", IWN, Orlando. Florida, USA, **2016**

T. M. Al tahtamouni, A. Sedhain, J. Y. Lin, and 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 ", ICNS-7, Las Vegas. Nevada, USA, **2007**

R. Dahal, **T. M. Al Tahtamouni**, Z. Y. Fan, J. Y. Lin, and H. X. Jiang, "Hybrid AlN-SiC deep ultraviolet Schottky barrier photodetectors", ICNS-7, Las Vegas, Nevada, USA, **2007**

T. M. Al tahtamouni, N. Nepal, J. Y. Lin, and H. X. Jiang, " Correlation between growth polarity and material quality of high-Al-content AlGa_xN alloys", APS March meeting, Denver, Colorado, USA, **2007**

T. M. Al tahtamouni, N. Nepal, J. Y. Lin, and H. X. Jiang, “ Growth and optical properties of c-plane Al rich AlN/AlGa_N Quantum wells”, MRS Fall meeting, Boston, Massachusetts, USA, **2006**

T. M. Al tahtamouni, N. Nepal, J. Y. Lin, and H. X. Jiang, “Growth and optical properties of c-plane Al rich AlN/AlGa_N Quantum wells”, APS March meeting, Baltimore, Maryland, USA, **2006**

T. M. Altahtamouni, M. L. Nakarmi, M. Khizar , Z.Y. Fan, J. Y. Lin, and H. X. Jiang, “Growth and Fabrication of III-Nitride Deep Ultraviolet Emitters”, APS March meeting Los Angeles, California, USA, **2005**

Patents

Patent (provisional):

Deep UV and extreme UV MSM, Schottky and, p-i-n photodetectors based on III-Nitrides grown on conducting or insulating substrates

Works Featured in Media:

“Researchers Reveal Secrets of Metalorganic Preflow for AlN MOCVD Process,”
Compound Semiconductor

https://compoundsemiconductor.net/article/101476/Researchers_reveal_secrets_of_metalorganic_preflow_for_AlN_MOCVD_process