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### EDUCATION

<b>Ph.D.</b> Electronic and Electrical Engineering, University of Sheffield, UK	Nov.2011
<b>M.Sc.</b> Electrical Engineering, King Fahd Univ. of Pet. & Min. (KFUPM), Saudi Arabia	Jan. 2002
<b>B.Sc.</b> Electronics and Communication Engineering, Osmania University, India	May 1999

### TEACHING EXPERIENCE

- **Assistant Professor**, Effat University, ECE Department, Jeddah, KSA, **Aug. 2015 – now**
- **Lecturer**, Electrical Engineering (EE) Dept., King Fahd University of Petroleum and minerals (KFUPM), Saudi Arabia, **Jan. 2002-June 2008**

### RESEARCH EXPERIENCE

- **Postdoctoral Research Fellow**, Electrical Engineering Program, King Abdullah University of Science and Technology (KAUST), Saudi Arabia, **Aug. 2012-Aug. 2015**  
Independently established a novel post-growth intermixing technique on InGaP/AlInGaP, notable is the demonstration of the first orange laser
- **EPSRC Prize Postdoctoral Research Fellow**, Electronic and Electrical Engineering (EEE) Dept., University of Sheffield (UoS), U.K., **Oct. 2011-July 2012**  
Developed broadband devices for OCT and Telecomm applications.

## PUBLICATIONS

1. **M. A. Majid**, D. T. D. Childs, R. Airey, K. Kennedy, R. A. Hogg, E. Clarke, P. Spencer, and R. Murray, "Strain Engineered Bilayers for Extending the Operating Wavelength of QD Lasers", **IET Optoelectron.**, vol. 5, no.3, pp. 100-104, 2011.
2. **M. A. Majid**, D. T. D Childs, K. Kennedy, R. J. Airey, R. A. Hogg, E. Clarke, P. Spencer and R. Murray, "O-band Excited State Quantum Dot Bilayer Lasers" **App. Phys. Lett.**, vol. 99, no. 5, pp. 051101-051101-3, Aug 2011.
3. **M. A. Majid**, D. T. D. Childs, H. Shahid, R. Airey, K. Kennedy, R.A. Hogg, E. Clarke, P. Spencer and R. Murray, "1.52  $\mu\text{m}$  Electroluminescence from GaAs-based Quantum Dot Bilayers" **Electron. Lett.**, vol. 47, no.1, pp. 44-46, Jan, 2011.
4. **M. A. Majid**, D. T. D Childs, H. Shahid, S. Chen, K. Kennedy, R. J. Airey, R. A. Hogg, E. Clarke, P. Howe, P. Spencer and R. Murray "Towards 1550 nm GaAs-based Lasers Using InAs/GaAs Quantum Dot Bilayers" **IEEE J. Sel. Topics Quantum Electron.**, vol. 17, no.5, pp. 1134-1342, Sept 2011
5. **M. A. Majid**, M. Hugues, D. T. D. Childs, R. A. Hogg, "Effect of Deposition Temperature on the Opto-Electronic Properties of MBE Grown InAs QD Devices for Broadband Applications" **Jpn. J. of Appl. Phys.**, Vol. 51, no.2, pp. 02BG09-02BG09-4, Feb 2012.
6. **M. A. Majid**, M. Hugues, S. Vézian, D. T. D Childs, R.A. Hogg, "Optimization of Quantum-Dot Molecular Beam Epitaxy for Broad Spectral Bandwidth Devices" **Photonics Journal, IEEE**, vol.4, no.6, pp.2066-2073, Dec 2012.
7. AM. Z. M Khan, **M. A. Majid**, T. K. Ng, D. Cha, B.S. Ooi, "Simultaneous Quantum Dash-well Emission in a Chirped Dash-in-well Superluminescent Diode with Spectral Bandwidth > 700 nm," **Optics Letters**, Vol. 38, Issue 19, pp. 3720-3723, Oct 2013.
8. R. T. El Afandy, **M. A. Majid**, T. K. Ng, L. Zhao, D. Cha, and B.S. Ooi, "Exfoliation of Threading Dislocation-Free, Single-Crystalline, Ultrathin Gallium Nitride Nanomembranes," **Advanced Functional Materials** 24 (16), 2305-2311, 2014.
9. H. Shahid, D. T. D. Childs, **M.A. Majid**, R. Airey, K. Kennedy, R.A. Hogg, E. Clarke, P. Spencer and R. Murray "Gain Spectrum Measurement Using the Segmented Contact Method with an Integrated Optical Amplifier" **J. Appl. Phys.** 115, 163105, 2014.
10. **M.A. Majid**, A.A. Al-Jabr, H.M Oubei, M.S. Alias, D.H. Anjum, T.K. Ng, B.S. Ooi, "First demonstration of InGaP/InAlGaP based orange laser emitting at 608 nm", **Electronics Letters**, 51, (14), p. 1102-1104, 2015
11. Hala H Alhashim, Mohammed Zahed Mustafa Khan, **M.A.Majid**, Tien Khee Ng, Boon S Ooi, "Sub-1100 nm lasing from post-growth intermixed InAs/GaAs quantum-dot lasers ", **Electronics Letters**, 51 (18): 1444-1445 , Aug 2015.
12. Al-Jabr, A. A. and **Majid, M. A.** and Alias, M. S. and Anjum, D. H. and Ng, T. K. and Ooi, B. S., " Large bandgap blueshifts in the InGaP/InAlGaP laser structure using novel strain-induced quantum well intermixing" **Journal of Applied Physics**, 119, 135703, 2016.
13. Al-Jabr AA, Mishra P, **Majid MA**, Ng T, Ooi BS; "Effect of annealing InGap/InAlGap laser structure at 950°C on laser characteristics". **Nanophoton.**10(3), 036004, 2016.
14. Rami T ElAfandy, Ayman F AbuElela, Pawan Mishra, Bilal Janjua, Hassan M Oubei, Ulrich Büttner, **M.A.Majid**, Tien Khee Ng, Jasmineen S Merzaban, Boon S Ooi ,” Nano membrane-Based, Thermal-Transport Biosensor for Living Cells “, **Small Wiley** ,13(7), 2016.
15. **M. A. Majid** "High performance GaAs-based superluminescent diode with 292nm emission bandwidth by using simple dot-in-a-well" **Journal of Nanophotonics** 12 (2), 026007, 2018.
16. Omar A. Kittaneh, **M.A. Majid**, "Comparison of two-lifetime models of solid-state lighting based on sup-entropy," **Heliyon (Elsevier)**,5(10), October 2019.
17. Charles Rajesh Kumar.J, **M.A.Majid**, "Renewable energy for sustainable development in India: current

status, future prospects, challenges, employment, and investment opportunities" **Energy, Sustainability and Society, 10(1):2, January 2020.**

18. Omar A Kittaneh, Heba Almorad,, Sara Helal, M A Majid "On the efficiency of type I censored samples" **IMA Journal of Mathematical Control and Information, April 2021.**
19. **M.A.Majid** et al. "Assessment of Optimum Installation and Power Injection Parameters for a Bifacial Rooftop System." Accepted IJRER, **June 2021.**
20. **M.A.Majid** et al, "Preferable parametric model for the lifetime of the organic light-emitting diode under accelerated current stress tests" accepted IEEE transactions on electron devices June 2021.

## PATENTS

- B.S.Ooi, M.A Majid, et al., Controlling the emission wavelength in group III-V semiconductor laser diodes, Patent Number: US 9755403, Application number: 15191826, September 2017.

## PRESENTATIONS (selected recent conference presentations)

1. T. Mouais, O. A. Kittaneh and **M. A Majid**, "The Effects of Electrode Physical Parameters on the Statistical Life Models of Li-Ion Battery," **2021 IEEE International IOT, Electronics and Mechatronics Conference (IEMTRONICS)**, 2021, pp. 1-5.
2. S Ammach, **M A Majid**, OA Kittaneh" Estimating the Lifetime Model for The Commercial Concentrator III-V Triple-Junction Solar Cells Using The Lognormal Distribution, 2021 **6th Asia Conference on Power and Electrical Engineering (ACPEE)**, 751-755.
3. **M. A. Majid**, "The largest QWI in the InGaP/InAlGaP laser structure using high compressive strain at elevated temperatures," 2020 **11th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)**, New York, NY, USA, **2020**, pp. 0833-0836, doi: 10.1109/UEMCON51285.2020.9298101.
4. S. Bahanshal, H. Alwazani, and **M. A. Majid**, "Design of RGB Laser Diode Drivers for Smart Lighting and Li-Fi using MATLAB GUI," 25 November 2019 **1st International Conference on Electrical, Control and Instrumentation Engineering (ICECIE)**, Kuala Lumpur, Malaysia, 2019, pp. 1-4, doi: 10.1109/ICECIE47765.2019.8974772.
5. H. Alwazani, S. Bahanshal and **M. A. Majid**, "Design of YAG Coated Laser Diode Driver with Feedback Mechanism," **2019 International Conference on Computer and Information Sciences (ICCIS)**, Sakaka, Saudi Arabia, **May 2019**, pp. 1-5, doi: 10.1109/ICCISci.2019.8716407.

## GRANTS AND FELLOWSHIPS

1. **Principal Investigator, External grant** "KACST Technology Innovation center on Solid-State Lighting.", Funding worth 90,0000 SAR (\$225000), Sept 2015-Dec 2020)

(Established Solid-state lighting/Photonics laboratory at Effat University from the funding, the lab has all the facilities to do LIV and spectral characterization of LEDs and LASERS)

2. Internal Research grant Effat University "*The Integration of Light-Fidelity in Smart Solid-State Lighting Systems*," Funding worth 20,000 SAR, 2018-now.
3. Postdoctoral fellow (Member) "Technology Innovation Centre" project for Gallium Nitride-based Solid State Lighting. KACST-KAUST-UCSB funding 50 million SAR ( \$13million) Aug. 2012-Aug 2015
4. **Attracted Independent EPSRC** (Engineering and Physical Sciences Research Council) Prize Postdoctoral funding worth £75000. Oct. 2011-July 2012
5. Member of £ 1/2 million EPSRC funded Project between Imperial College London and the University of Sheffield (EPSRC grant: EP/F033427/1 and EP/F03427X/1). Aug. 2008-Aug 2011
6. Member of £ 3/4 million BBSRC funded Project for the growth and optimization of MBE grown quantum dots for broadband Applications (BB/E002676/1). May 2009-Aug. 2012
7. Member of five projects worth ~1 million Saudi Riyals, funded by e-learning center at Deanship of Academic Development (DAD) of KFUPM to develop e-courses for Electrical Engineering Dept. These courses now stand at 654, all delivered to WebCT, catering to all KSA distance learning programs. Aug. 2004-Aug. 2008
8. Co-investigator, Project titled "DC Power Supply Simulator," College of Engineering Sciences, Innovation Grants Scheme (2005-2006), KFUPM. Sept. 2005-Aug. 2006

## AWARDS AND HONORS

- Awarded Independent EPSRC, U.K, Postdoctoral Research Funding.
- Awarded EPSRC Scholarship for Ph.D. at the University of Sheffield.
- Awarded Research Assistantship, King Fahd University of Petroleum and Minerals.

## THESIS SUPERVISIONS

1. Supervisor, Salwa Ammash, Masters in Renewable Energy Engineering (MSEE),  
"Estimating the lifetime model for the concentrator III-V triple-junction solar cells using statistical distributions," Sep. 2020-June 2021. ( Submitted one Conference and Journal Paper)
2. Supervisor, Talal Almouis, Masters in Renewable Energy Engineering (MSEE),  
"An Intensive Comparative Study on the Lifetime Models of Commercial Lithium-Ion Batteries" Sep. 2020-June 2021. (Submitted one Conference and Journal Paper)
3. Co-supervisor, Raheef Aljefri, Masters in Renewable Energy Engineering (MSEE),  
"Modeling and Event-Driven Processing Based Elucidation of the Power Quality Disturbances in smart grids," Effat University, Sept.2019- June 2020.

## PROFESSIONAL MEMBERSHIPS



- Member of IEEE.

## RELEVANT SKILLS

Extensive working experience in one of the most advanced nanofabrication clean room and nano-measurement equipment's facilities at the National center for III/V technologies of the University of Sheffield and the Core labs at King Abdullah University of Science and Technology, extensively utilized the techniques of dry plasma etching (ICP, RIE), lithography, atomic layer deposition, chemical vapor deposition, wet chemical etching, atomic force microscopy, scanning electron microscopy, RTP, dicing, bonding, packaging, and other nanofabrication tools

## REFERENCES

### Boon Siew Ooi

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