

# Feras AlQatari

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Building 3, Level 2, KAUST, Thuwal, Saudi Arabia

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## Education:

### **King Abdullah University of Science and Technology (KAUST)**

Doctor of Philosophy - Materials Science and Engineering

July 2019 – 2021 anticipated

Master of Science - Materials Science and Engineering

August 2017 – May 2019

- Thesis advisor: Prof. Xiaohang Li
- Thesis title: Theoretical and Experimental Studies of Optical Properties of BAlN and BGaN Alloys
- GPA: 3.63

### **The University of Maryland, College Park, MD**

July 2013 – May 2017

Bachelor of Science - Materials Science and Engineering

- GPA: 3.69

### **The University of Kansas, Lawrence, KS**

September 2012 – June 2013

Foundation-year program (college preparatory year)

- GPA: 3.93

## Experience:

### **Computational Physics and Materials Science**

May – August 2016

King Abdullah University of Science and Technology (KAUST) -- Prof. Udo Schwingenschlogl

- Calculated thermoelectric figure-of-merit of lead chalcogenides from first principles

### **Nanomaterials for Emerging Devices (Bing Research Group)**

July – September 2015

The University of Maryland, College Park, MD -- Prof. Liangbing Hu and Prof. Mingwei Zhu

- Fabricated and optimized the making of the transparent wood composites

### **Functional Nanomaterials Lab (FuN Lab)**

June – July 2014

King Abdullah University of Science and Technology (KAUST) -- Prof. Osman Bakr

- Synthesized and optimized the synthesis of a quantum cluster
- Characterized the cluster using UV-Vis spectroscopy, ESI mass spectrometry

## Publications:

- **AlQatari, F.**, Sajjad, M., Lin, R., Li, K. H., Schwingenschlöggl, U. Li, X. (2020) "First-principle calculation of refractive indices of BAlN and BGaN." *Under review*.
- Lin, R., Alnakhli, Z., **AlQatari, F.**, Li, X. (2020) "Optimization of reflective metalens based on distributed Bragg reflector structures." *Under review*.
- Liu, K., Sun, H., **AlQatari, F.**, Guo, W., Liu, X., Li, J., Torres-Castanedo, C. G., Li, X. (2017) "Wurtzite BAlN and BGaN alloys for heterointerface polarization engineering." *Applied Physics Letters*, 111, 222106.
- Zhu, M., Li, T., Davis, C. S., Yao, Y., Dai, J., Wang, Y., **AlQatari, F.**, Gilman J. W., Hu, L. (2016) "Transparent and haze wood composites for highly efficient broadband light management in solar cells." *Nano Energy*, 26, 332-339.

## Software Skills:

- Programming in: C++, Java, Arduino, and MATLAB
- Vienna ab-initio Simulation Package (VASP), FDTD Lumerical, APSYS

## Honors:

**KAUST Gifted Student Program (KGSP):** Full scholarship in a competitive program

**Languages:** Fluent in Arabic and English