Dr TALHA QAMAR

PhD. Physics

ABOUT ME

I am a dynamic individual with excellent teamwork and communication skills. I seek out new responsibilities irrespective of rewards and recognition. My main strengths are adaptability, dependability, and the determination to get the job done, as evidenced by my prior experiences. I firmly believe in continuous self-improvement and am always ready to tackle challenges head-on

CONTACT

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TOOLS

- AFM
- Profilometer
- Optical microscope
- SEM
- RAMAN spectroscopy
- Photoluminescence spectroscopy
- L-EDIT (Mask designing)
- XPS
- Ansys
- Matlab
- Simulink
- Solidwork
- Nx 9.0
- AutoCAD
- Eclipse
- Multisim
- Python
- Java
- C/C++

Languages

EDUCATION

PhD. Experimental Physics

Newcastle University

Sep 2018 - April 2022

May 2023 - March 2024

BSc. Mechatronics Engineering

University iof Southern Denmark

Sep 2012 - June 2016

MSc. Mechatronics Engineering

University iof Southern Denmark

Sep 2016 - June 2018

EXPERIENCE

Research Assistance/ Research Associate

Newcastle Univeristy

May 2022 - May 2023

Teaching, Demonstration & marking students

Newcastle Univeristy

Nov 2018 - current

PROJECTS

Carbon-based microfludic impedacne cytometery (PhD's Thesis)

Light Sensors based on hybrid graphene-organic semiconductors photoresistors (Master's Thesis)

Effects of temperature on bulk Hetrijunction polymer solar cells

Influence of ICPRIE parameters on Black Silicon characteristics

Optimization of small molecule-based organic solar cells using BCP as electron transport layer

Stair-Climbing Hand-Truck

Two-photon ablation on carbon materials for negative 3D printing

Encapsulation of small molecule solar cells for improved stability and lifetime (Bachelor's Thesis)

Skaertoft Molle (industrial Project): Ingredients measuring machine

Influence of ICPRIE parameters on Black Silicon characteristics

Welfare techonology innovation for Multiple Sclerosis Patients: Assistive Keyboard-glove

Robotics: The Ant

SKILLS

- Microfluidic channel fabrication & characterization
- Graphene growth and patterning technique
- Microfluidic Impedance cytometry
- Two-photon ablation
- Photovoltics
- Organic semiconductors
- Carbon nanotubes
- Thin-film electrodes for photoelectronic
- PVD/CVD Techniques
- OPV fabrication & Characterization
- Photolithography

PUBLICAITON

Co-author

Patil, B. R., Liu, Y., Qamar, T., Rubahn, H.-G., & Madsen, M. (2017). 4p NPD ultra-thin films as efficient exciton blocking layers in DBP/C70 based organic solar cells. Journal of Physics D: Applied Physics, 50(38), 385101.

Patil, B. R., Ahmadpour, M., Sherafatipour, G., Qamar, T., Fernández, A. F., Zojer, K., Rubahn, H.-G., & Madsen, M. (2018). Area dependent behavior of bathocuproine (BCP) as cathode interfacial layers in organic photovoltaic cells. Scientific Reports, 8(1).