

## NGERNG, Joshua Yong Chang

Contact: +60143233158

Email: joshuangerng@gmail.com

I am a fresh graduate from Xiamen University Malaysia with a Bachelor's degree in New Energy Science and Engineering. Having a passion for exploring new possibilities for the future energy production through material science, I aspire to leverage my knowledge and skills to achieve your company goals. I am a diligent worker in accomplishing given tasks and an active team player. My interest towards a circular economy model drives me in contributing towards a more efficient and sustainable future.

### Work Experience

**JingAo Solar Co. Ltd. , Sept 2020 – Jan 2021**

**Penang, Malaysia**

*Intern in Production Department*

- Monitoring and routine quality assurance of silicon wafers to ensure smooth solar cell production (Texturing, Diffusion, Laser and Etching processes)
- Detect and resolve abnormalities during production with supervisor and colleague.
- Conduct IVOC test to identify the electrical properties of silicon wafers after diffusion process
- Conduct electroluminescence (EL) and photoluminescence (PL) imaging to determine defects in final product
- Conduct Zeta test to ensure even and right slope gradient on pyramidal structure on surface of silicon wafers after texturing process.
- Programming in VBA to facilitate data organization for quality assurance of silicon wafers and automate IVOC test reports.

### Relevant Skills

- Material Science
  - Versed with the semiconductor physic principles behind solar cells and LEDs
  - Familiar on production processes to achieve the desired electrical properties in a solar cell
- Electrical circuits
  - Proficient in the theoretical calculation of voltage and current in DC and AC circuits
  - Keen execution of soldering techniques for wires and circuit boards
- Excel (VBA)
  - Construct excel with macros to keep track of quality production output
  - Automate table and graphs for reporting of complicated large data
- AutoCAD
  - Construct 3D model and supplement engineering drawing of 3D model with its related components
- Program C
  - Design functional codes to create simple applications such as calculator and calendar
- Microsoft Office
  - Proficient in Microsoft Word, PowerPoint and Excel for documentation and reporting

### Education

**42KL Piscine programme, September 2022**

**Kuala Lumpur, Malaysia**

- Rigorous training in C (basic string operations, memory allocation, file manipulation)
- Worked with others to complete various projects.

**Xiamen University Malaysia (XMUM), April 2022**

**Sepang, Malaysia**

*Bachelor degree in New Energy Science and Engineering – CGPA-2.81*

- Written dissertation on “Vertical farm, a potential asset to ensuring food security in Malaysia”
- Team member of logistic department for Xiamen Malaysia Christian Fellowship, 2019 – 2020
- Social media team in media management for Xiamen Malaysia Community Service Project

**UCSI College, November 2017**

**Kuala Lumpur, Malaysia**

*A levels - 1A\* in Physics 3A in*

### Language Proficiency

Professional, English (Proficient in speaking and writing)

Native, Chinese (Proficient in speaking and writing (Mother language))

Conversational (Able to communicate verbally and simple writing)

## **Reference**

Dr Tan Swee Tiam

Associate Professor, Department of New Energy Science & Engineering,  
Assistant Dean (Research and Industrial Collaboration), School of Energy and Chemical Engineering,  
Director, Kelip-kelip! Center of Excellence for Light Enabling Technologies  
Faculty of Engineering, Xiamen University Malaysia.

Email: [sweetiam.tan@xmu.edu.my](mailto:sweetiam.tan@xmu.edu.my)

Dr. Chong Su Sin (张素馨)

Assistant Professor, Department of New Energy Science & Engineering,  
Faculty of Engineering, Xiamen University Malaysia.

Office Tel: +603 8705 5045

Email: [susin.chong@xmu.edu.my](mailto:susin.chong@xmu.edu.my)

Asst. Prof. Dr. Nalina Thurairajah

Head, A-Level Academy, UCSI College

Email: [nalina@ucsicollege.edu.my](mailto:nalina@ucsicollege.edu.my)