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## Mr. Masoud Al-Rasheidi (IRC-REPS)

### Laboratory technician

Interdisciplinary Research Center for Renewable Energy and Power Systems (IRC-REPS)  
King Fahd University of Petroleum & Minerals, Saudi Arabia

### Executive Summary

Highly motivated Lab technician / Process operator with extensive training and experience. Results-driven laboratory expert who has an aptitude for overcoming abstract and difficult problems, conducting and supporting scientific investigations & experiments, and accomplished in several engineering disciplines. A well-presented, confidently personable and efficient professional with an ability to work independently in a changing and multi-tasking environment with numerous and competing deadlines. Seeking a challenging career within a dynamic and progressive organization that encourages independent thinking while staying true to the company's core values and where enthusiasm, dedication and the ability to manage tasks effectively are prerequisite in driving the organization forward.

### Education

- ❑ Bachelor's Degree in Physics Al-Jouf University College of Science, Department of Physics

## Distinguished Projects

1. Novel graphene wrapped Ni-Co-Layered double hydroxide electrode for high performance hybrid super capacitors, KFUPM-DSR Sep 2019 – Aug 2021.
2. Novel double layer atmospheric pressure chemical vapor deposition method for all inorganic perovskite synthesis: Development of PV technology stable against harsh weather conditions, KFUPM-DSR, Sep 2020 – Aug 2023.
3. Enhancing the stability of the perovskite solar cells via polymer passivation for building applications, IRC-REPS, Jul 2021 – ongoing.
4. Effect of High Outdoor Temperature on the PV modules with Advance Internal Architecture, , IRC-REPS, Jul 2021 – ongoing.

## Research Summary

- Publications : 1
- Citations : 1
- H-Index : 1

## Award and Recognitions

Almarai's Group Award

## Skills and Expertise

**Software:** *Origin, VESTA, GASAS2, PC1D, MATLAB, SCAPS1, High Score, Image J, GPVDM, etc.*

### Instrumentation

*Four probe unit, Type tester, Spin coating unit, Diffusion and Oxidation Furnace, Ellipsometry, Current-voltage (I-V) measurement, Capacitance-voltage (C-V) measurements, Cyclic-voltammetry measurements, Spectral response measurement, Sputtering coating system, Thermal evaporation coating system, Lifetime measurements, Scanning electron microscopy (SEM), UV-visible spectrophotometer, Spectrofluorometer (PL), Profilometer, Fourier transform infrared spectroscopy (FTIR), Chemical vapor deposition (CVD), Raman spectroscopy, X-ray diffraction system (XRD), Atomic force microscopy (AFM), etc.*

### Characterization Techniques

*AFM, SEM, TEM, Raman, UV-Vis, PL, XRD, I-V, C-V, IPCE, XPS, SIMS, etc.*

### Solar Cell Fabrication

*Charge transport layer, Perovskite coating, Contact formation, etc.*

### Graphene Synthesis

*Synthesis, functionalization and characterization of graphene oxide, reduced graphene oxide, and graphene quantum dots.*

### Nanomaterial's synthesis

*Metal oxides, Metal hydroxide, Layered double hydroxide, Dual metal oxide, composite with graphene, etc.*