Curriculum Vitae

Personal Identity
Name: Emad H. Hussein
Country of Study: Germany / Berlin
Country of Residency: Iraq
Gender: Male
Mitral Status: Married

Academic Qualification
Ph.D. (**Dr.rer.nat**) Physics – 2017 / Humboldt-University of Berlin, **Germany**

Specialization
Experimental Nano-Physics/Nano-Electronics

Ph.D. Dissertation Title
Fabrication and Characterization of GaP/Si Nanodiode Array Based on Nanowires Synthesized from GaP Epilayers Grown on Si Substrates.

Ph.D. Supervisor:
Prof. Dr. W. T. Masselink

Employments
Ph.D. student: Oct. 2011 – Feb. 2017, Institute of Physics, Humboldt-University of Berlin, Germany.
Assis. Prof.: 2019 to present, Dept. of Physics, College of Science, Mustansiriyah University, Iraq.

Interests
(1) MBE and CVD growth of semiconductor thin films and nanomaterials.
(2) Hydrothermal synthesis of nanostructures.
(3) Fabrication of optoelectronic and Nano-electronic devices.
(4) Optical and electrical characterization of crystalline materials.
(5) X-ray diffraction analysis.
(6) Defects in hetero-structure interface.
(7) Low-frequency noise spectroscopy.
(8) Photo-activity of oxide materials.

Certificates Awarded
(1) English Language Certificate issued from (**Iowa-State University / USA).**
(2) German Language Certificate (A2 Level) issued from (**Eurasia Institute – Berlin**).
(3) Nanotechnology: A Maker's Course, Online
(**Duke University & The University of North Carolina/ USA**)

Practical Experiences
1) MBE growth of GaP and InP thin films and nanostructures.
2) Synthesis II-VI materials (e.g. CdS).
3) Fabrication of TiO_2 nanotubes for photochemical cells.
4) Biosynthesis of metallic oxide materials (e.g. CuO nanoparticles).
5) Metal-assisted chemical etching for nanostructures.
6) X-ray diffraction measurements: symmetric and asymmetric.
7) Photoluminescence spectroscopy.
8) Raman spectroscopy.
9) Scanning-electron microscopy measurements.
10) Transport measurements (C-V and I-V).

<u>Teaching Experiences</u>
1) General Physics
2) Electronics

<u>Reviewer Experiences</u>
(1) Reviewer in Agriculture and Food Security (Journal)

<u>Skills</u>
1) OriginPro Lab program.
2) Lab-view software.
3) Latex program.
4) Matlab.
5) Surfer program.
6) All Microsoft office software