AMIRHOSSEIN BAYANI

CONTACT

Freiburg, 79111, Germany

+49 157 39693972

amirhossein.bayani@gmail.com

CORE QUALIFICATIONS

- Computational Material Science:
- *Solar Cells; Semiconductors; Field Effect Transistors*
- Computer Skills:
- *Windows, Linux and Virtual Machines*
- *HTML, CSS, Javascript, Python*
- *Microsoft Word/ Power point/ Excel*
- *Origin & Qtiplot Software*
- *QuantumATK & Virtual NanoLab (VNL)*
- *VASP simulation package*
- *Writing scientific paper*
- *Familiar with: Quantum Espresso simulation package; Silvaco TCAD; COMSOL Multi-Physics*

REFERENCES

Dr. Daniel Urban, Fraunhofer IWM, Freiburg, Germany. Email: daniel.urban@iwm.fraunhofer.de. Telephone: +49-761-5142-378

Dr. Daryoosh Dideban, University of Kashan, Kashan, Iran. Email: dideban@kashanu.ac.ir. Telephone: +98-913-3617054

Dr. Jan Voves , CTU in Prague, Czech Republic. Email: voves@fel.cvut.cz, Telephone: +420-603-761634

Results-driven Material Scientist with a decade of experience specializing in simulation and modelling. Expertise in Nanoelectronics Engineering and Solid-State Physics, driving innovative solutions at the forefront of scientific advancements. A creative thinker who consistently pushes boundaries and delivers tangible results

EXPERIENCE

July 2021 - July 2023

Scientific Researcher ***Fraunhofer Institute for Mechanics of Materials IWM***, Freiburg, Germany

- Computational modelling of surface and interface of Perovskite Solar Cell and electron/hole transport layers using density functional theory (DFT) and method beyond DFT
- Studying the point defects in semiconductors and Perovskite materials

September 2018 - September 2020

Postdoc Researcher ***Angstrom Lab, Uppsala University***, Uppsala, Sweden

- Simulation of Au intercalation on SiC/Graphene using DFT
- Studying the spin-orbit coupling effect on Graphene/Au

EDUCATION

August 2023 – now

Full Stack Software Developer student at Code Institute

September 2017

Ph.D. Nanotechnology

University of Kashan, Iran

- Analysis of Electrical Characteristics and Investigation of Sensing Properties of Nanoscale Transistor based on Germanium using DFT+NEGF.

July 2017

Visiting researcher

Czech Technical University, Prague, Czech Republic

January 2013

M.Sc. Physics (Solid State Physics)

Ferdowsi University of Mashhad, Mashhad, Iran

- Studying the Electronic properties of boron nitride nanotubes in the presence of hydrogen adsorption

ADDITIONAL INFORMATION

- Linkedin: http://www.linkedin.com/in/amirhosseinbayani
- Github: https://github.com/teman67
- Orcid: https://orcid.org/0000-0002-7892-3513

LANGUAGES

English: C1
Advanced

Persian: C2
Proficient

German: A2
Elementary

Swedish: A2
Elementary

August 2010
B.Sc Physics
Ferdowsi University of Mashhad, Mashhad, Iran

INTERESTS

- Following Tech News and Trends
- Playing Chess and Volleyball
- Cycling and Travelling
- Reading Books
- Watching Movies and Series