Meaad Salim Al-Hadidi

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Profile

I am a highly qualified researcher with strong academic background. I can work effectively both as team member and independently. Furthermore, I am a conscientious person who works hard and pays attention to details. I'm flexible, quick to pick up new skills and eager to learn from others. My key expertise is in the density functional modelling of defects in semiconductors and metal-oxide for nano-electronic applications. I have lectured undergraduate optical physics in Iraq for three years and, supported stage 1 and 3 teaching labs for twelve years.

Qualifications

- 2010-2015 PhD, Electrical and Electronic Engineering, Newcastle University: *"A Density Functional Study of Point Defects in Nanoelectronic Materials*"
- 1996-1998 MSc in Physics, College of Science, University of Mosul.
- 1988-1992 BSc in Physics, College of Science, University of Mosul.

Training

- Introduction to learning and teaching in higher education, Newcastle University, 2015.
- ESOL for work Level1, Action Language, 2015.

Career History

- 2016-, lecturer at University of Mosul, College of Science, Iraq
- 2015-2016, academic visitor researcher, Newcastle University
- 2015-2016, teacher, Al-Mustafa Al-Arabia primary school, Newcastle upon Tyne
- 2015-2016, volunteer teaching assistant, Action Language, Newcastle upon Tyne
- 1999-2010, lecturer, University of Mosul, College of Science, Iraq
- 1992-1996, lecturer assistant, University of Mosul, College of Pharmacy, Iraq

Lecturing experience

- Hydropower system, L4, New and Renewable Energy Department, Collage of Science, Mosul University.
- Electrical Measurements and control and Energy Storage, L3, New and Renewable Energy Department, Collage of Science, Mosul University.
- Meteorology, L2, New and Renewable Energy Department, Collage of Science, Mosul University.
- Optics lab, L3, Physics Department, Collage of Science, Mosul University.
- Soft condensed matter, L3, Biophysics Department, Collage of Science.
- Laser and its applications, Physics Department, Collage of Science, Mosul University.
- Physics, L1, College of Pharmacy, Mosul University.

- English Language, Action Foundation, Newcastle upon Tyne, UK.

Key skills

- Use of MATLAB for scientific data analysis; running density functional theory simulations (AIMPRO) on parallel computing platforms; data management and manipulation within Linux operating systems
- IT skills in software including MS-office, LaTeX and linux-based packages such as gnuplot, POVRay and jmol
- Broad knowledge of physics and chemistry, including optics, solid-state physics and thermodynamics
- Trained in the use of Raman spectroscopy and AFM systems
- Strong presentation skills, as evidenced by the conference poster prize, 2013
- Confident to communicate with other people, share ideas and complete tasks efficiently: collaborative work and participation in a productive research group have been key elements of my PhD experience
- My work in prior to my PhD also shows I work to deadlines and meet targets
- Good organisational skills as well as experience in managing several projects simultaneously is evidenced by my PhD and publications

Professional Body Membership

- Iraqi students Society, UK (ongoing).
- Al-Kindi Society for Engineers, UK (ongoing).
- IEEE society of Engineering, UK (2015).
- Institute of Physics, UK (2014).

Publications

1. Oras A. Al-Ani, J.P. Goss, Meaad Al-Hadidi, P.R. Briddon, M.J. Rayson, N.E.B. Cowern, "Voids in silicon as a sink for interstitial iron: a density functional study", Journal of Crystal Growth, Vol. 468, Pag. 101–103, 2017.
2. Oras A. Al-Ani, J.P. Goss, Meaad Al-Hadidi, P.R. Briddon, M.J. Rayson, N.E.B. Cowern, "Impact of grain boundary structures on trapping iron", Journal of Crystal Growth, Vol. 468, Pag. 488–451, 2017.
3. Meaad Al-hadidi, J P Goss, P R Briddon, Raied Al-hamadany and M J Rayson, "Ab initio calculation of carbon impurities in ferroelectic lead-titanate", submitted to IEEE 2016.
4. Meaad Al-hadidi, J P Goss, O A Al-Ani, P R Briddon and M J Rayson, "Density functional calculations of carbon substituting for Zr in barium zirconate", submitted to Journal of Crystal Growth, 2016
5. Meaad Al-hadidi, J P Goss, P R Briddon, Raied Al-hamadany, Mariam Ahmed and M J Rayson, "First-principles investigation of carbon substitution for lead in ferroelectric lead titanate", Ferroelectrics, Vol.498, 12-17, 2016.
6. Meaad Al-hadidi, J P Goss, P R Briddon, Raied Al-hamadany, Mariam Ahmed and M J Rayson, "Association of oxygen vacancies with carbon

impurity in strontium titanate: first principles calculations", Ferroelectrics, Vol.497, 9-14, 2016.

7. Oras A Al-Ani, J P Goss, N E B Cowern, P R Briddon, M Al-hadidi, R Al-Hamadany and M J Rayson, "A Density Functional Study of Iron Segregation at ISFs and $\sum 5$ -(001) GBs in mc-Si" Solid State Phenomena Vol. 242, 224-229, 2016.
8. Meaad Al-hadidi, J P Goss, P R Briddon, Raied AL-Hamadany, Mariam Ahmed and M J Rayson, "Density functional simulation of carbon at the titanium site in perovskite barium titanate", IOP Conf. Series: Materials Science and Engineering, Vol.80, 012002, 2015.
9. Meaad Al-hadidi, J P Goss, P R Briddon, Raied AL-Hamadany, Mariam Ahmed and M J Rayson, "Carbon impurities in SrTiO3 from first principles", Modelling Simul. Mater. Sci. Eng., Vol.23, 015002, 2015.
10. Meaad Al-hadidi, J P Goss, P R Briddon, Raied AL-Hamadany and Mariam Ahmed, "Carbon at the Ti site in strontium titanate from first principles", Journal of Physics: Conference Series, Vol. 472, 012006, 2013.
11. Raied Al-Hamadany, J P Goss, P R Briddon, Shahin A Mojarad, Meaad Al-hadidi, A. G. O'Neill, and M. J. Rayson, "Oxygen vacancy migration in compressively strained SrTiO3", J. Appl. Phys., Vol. 113, 024108, 2013.
12. Meaad Al-hadidi and Maan Mohamad Shaker, "Microbending losses of single coat optical fiber", Al-tiqanee Jornal, 1998.
13. Mohmmed S. Ismaail, Meaad Salim, Nawfel Y. Jamil, "The effect of Gamma-Radiation on the Electrical Properties of MOS Devices", Al-rafiden Science Journal, Vol. 16, pag. 12- 20, 2005.

Conference Presentations

- "Modelling the impact of strain and pressure upon the migration of self-interstitials and vacancies in diamond." Presented at the De Beers diamond conference, Warwick, UK, July 2016.
- N8 HPC "Network Event - New approaches to atomistic / quantum simulation of materials" Workshop, University of York, York, UK, January, 2016 (poster).
- EMF 2015 (13th European Meeting on Ferroelectricity), University of Porto, Porto, Portugal, July, 2015 (poster).
- N8 HPC Network Event- HPC for Quantum Materials Simulation, University of York, York, UK, January, 2015 (poster).
- EURODIM 2014 (12th Europhysical Conference on Defects in Insulating Materials), University of Kent, Canterbury, UK, July, 2014 (poster).
- Dielectric 2013 conference, Reading University, Reading, UK, April, 2013 (poster).
- ARC 2013 (Annual Research Conference), Newcastle University, Newcastle upon Tyne, UK, January, 2013 (talk).
- ARC 2012 (Annual Research Conference), Newcastle University, Newcastle upon Tyne, UK, January, 2012 (talk).

Awards

- IoP Dielectric group financial support to participate in EURODIM 2014 conference, University of Kent, Canterbury, UK
- Best poster in the dielectric 2013 conference, Reading University, 2013, UK
- PhD scholarship from University of Mosul/ Iraqi Ministry of Higher Education and Scientific Research (MOHESR), 2010

Hobbies and Interests

I am interested in computer programs. I also enjoy reading, listening to music and going out with my friends. I have travelled many times to different countries and that helped develop my communication skills through meeting a variety of people.