

PERSONAL DATA:

Name: Heba Soker Mohamad, Mohamad

Business Address Department of Physics Faculty of Science Assuit
University Assiut, Egypt

E-mail: h_s332003@yahoo.com
heba.soker@googlemail.com

**ACADEMIC APPOINTMENT**

From August 2018 **Lecturer**
Department of Physics, Faculty of Science, Assiut University, Egypt.

Oct. 2003 – Juni 2018 **Demonstrator**
Physics Department, Faculty of Science, Assiut University, Egypt.

May 2012- March 2019 **Ph.D. student and Researcher**
University of Greifswald, Institute of Physics, Soft Matter and Biophysics (Prof. Christiane Helm), Greifswald, Germany

Oct. 2010 – Nov 2012 **Master student**
IMTEK - Department Of Microsystems, University of Freiburg, Freiburg, Germany, Fraunhofer Institute for Applied Solid State Physics IAF, Freiburg, Germany

Oct. 2003 – Dec. 2007 **Master student**
Department of Physics, Faculty of Science, Assiut University, Egypt.

EDUCATION

19.04.2012 – 29.06.2018 **Doctor rerum naturalium(Dr. rer. Nat.) (magna cum laude)**
Thema " Surface Forces Characterization of polyelectrolyte monolayers and multilayers"
The University of Greifswald, Institute of Physics, Soft Matter and Biophysics (Prof. Christiane Helm), Greifswald, Germany

19.10.2008 – 22.08.2011 **Master (M.Sc.) in Microsystems Engineering**
IMTEK - Department Of Microsystems, University of Freiburg, Freiburg, Germany

01.05.2010 – 22.08.2011 **Master thesis**
Thema " Fabrication and optical analysis of nano-wires in diamond"
IMTEK - Department Of Microsystems, University of Freiburg, Freiburg, Germany, Fraunhofer Institute for Applied Solid State Physics IAF, Freiburg, Germany

01.10.2004 – 01.10.2005 **Diploma course in Physics**
Assiut University, faculty of science, Physics Department, 71516 Assiut – Egypt

1999- 2003 **B.Sc. in Physics**
Assiut University, faculty of science, Physics Department, 71516 Assiut – Egypt

TECHNIQUES

The scanning electron microscope, Atomic force microscope, optical microscope, fluorescence microscopy, Absorption and fluorescence spectroscopy, thermal evaporation, sputtering, induction furnace, x-ray Reflectometry

Computer knowledge Microsoft Office, Matlab, Origin, Photoshop, Google SketchUp, Gwyddion, Nano-scope analysis

Publications

- Surface Forces of Asymmetrically Grown Polyelectrolyte Multilayers: Searching for the Charges, **Heba S. Mohamad**, Sven Neuber, and Christiane A. Helm, *Langmuir* 2019, 35, 48, 15491–15499
- Photoactivation of Diiodido–Pt(IV) Complexes Coupled to Upconverting Nanoparticles, Stefanie Perfahl, Marta M. Natile, **Heba S. Mohamad**, Christiane A. Helm, Carola Schulzke, Giovanni Natile, and Patrick J. Bednarski, *Mol. Pharmaceutics*, 2016, 13 (7), pp 2346–236
- Accelerated Cell-Surface Interlocking on Plasma Polymer-Modified Porous Ceramics, Henrike Rebl, Birgit Finke, Jürgen Schmidt, **Heba S. Mohamad**, Roland Ihrke, Christiane A. Helm, J. Barbara Nebe *Material Science and Engineering C*, 2016, 69:1116-24
- Surface Forces of Asymmetrically Grown Polyelectrolyte Multilayers: Searching for the Charges, **Heba S. Mohamad**, Sven Neuber, Christiane A. Helm, *Langmuir* 2019, 35, 48, 15491–15499

International conferences

- Phenalenyl-based Organic Barriers for Tunnel Junctions, N. Jha, C. Denker, A. Pariyar, P.K. Vardhanapu, **Heba S. Mohamad**, A. Zinfar, A. Ahrens, T. Meyer, J. Walowski, C.A. Helm, M. Seibt, S. Mandal, and M. Münzenberg, 64th Annual MMM Conference, Nov 6, 2019, in Las Vegas, U. S. A.
 - How to tune the surface forces of PDADMA terminated polyelectrolyte multilayers, **Heba S. Mohamad**, Sven Neuber, and Christiane A. Helm, **Oral presentation**, Annual Conference of the DPG and DPG Spring Meeting 06 - 11 March 2018, Berlin, Germany.
 - A wide range of surface forces of PSS terminated polyelectrolyte multilayers, **Heba S. Mohamad**, Sven Neuber, Annkatrin Sill, and Christiane A. Helm, **Poster**, Annual Conference of the DPG and DPG Spring Meeting 06 - 11 March 2018, Berlin, Germany.
 - High TMR at Room Temperature in Magnetic Tunnel Junctions with Phenalenyl-molecule Tunnel Barriers, Neha Jha, Christian Denker, Anand Paryar, Pavan K. Vardhanapu, **Heba S. Mohamad**, Ulrike Martens, Christiane A. Helm, Swadhin Mandal, and Markus Münzenberg, **Poster**, Annual Conference of the DPG and DPG Spring Meeting 06 - 11 March 2018, Berlin, Germany.
 - Surface forces of polyelectrolyte multilayers in different growth regimes, **Heba S. Mohamad**, Malte Paßvogel, Annkatrin Sill, and Christiane A. Helm, **Oral presentation**, Annual Conference of the DPG and DPG Spring Meeting, 19 – 24 March 2017, Dresden, Germany.
 - PLY-Cu for organic MTJs, Christian Denker, Pavan K. Vardhanapu, Bikash Das Mohapatra, Ulrike Martens, Heba S. Mohamad, Mykola Medvidov, Christiane A. Helm, Swadhin Mandal, and Markus Münzenberg, **Poster**, Annual Conference of the DPG and DPG Spring Meeting, 19 – 24 March 2017, Dresden, Germany.
 - Long-ranged steric forces between physisorbed polyethylenimine-iron complexes, **Heba S. Mohamad**, Heiko Ahrens, and Christiane A. Helm, **Oral presentation**, Annual Conference of the DPG and DPG Spring Meeting 06 - 11 March 2016, Regensburg, Germany.
 - Optimisation of Ion Beam Etching Process for Fabrication of CoFeB/MgO Magnetic Tunnel Junctions, M Zanáška, C Denker, R Hippler, **Heba S. Mohamad**, C Helm, M Münzenberg, M Medvidov, M Delcea, WDS'16 Proceedings of Contributed Papers, Physics, 150–154, 2016.
 - Activation of light-sensitive diiodido-Pt (IV) complexes by near-infrared irradiation, up-converted by nanoparticles, Stefanie Perfahl, Patrick J. Bednarski, Marta M. Natile, Giovanni Natile, **Heba S. Mohamad**, Christiane A. Helm, **Poster**, Metals in Medicine Gordon Research Conference -, 2014, New Hampshire.
 - AFM and physicochemical characterization of Upconversion Nanoparticles, poster, **Heba S. Mohamad**, Peter Nestler, Harm Wulff, Stefanie Perfahl, Patrick Bednarski, and Christiane A. Helm, **Poster**, DPG Spring Meeting, 10 - 15 March 2013, Regensburg, Germany.
 - Two-dimensional arrangements of periodic diamond wires for photonic applications, **Heba S. Mohamad**, W. Smimov, M. Wolfer, C.E. Nebel, Fraunhofer Institute for Applied Solid State Physics, Germany, **Oral presentation**, 22nd European Conference on Diamond, Diamond-like materials, carbon nanotubes and nitrides, September 4-9, 2011 Garmisch-Partenkirchen, Bavaria, Germany
- Diamond Prize for Young Scholars, 22nd European Conference on Diamond, Diamond-like materials carbon nanotubes and nitrides, September 4-9, 2011 Garmisch-Partenkirchen, Bavaria, Germany

Awards and prizes